86 ACC#1

364391

Final
2/18/93
Tran

Exemption 6

RCRA FOLLOW-UP INSPECTION REPORT WAYNE MANUFACTURING COMPANY

CEDAR RAPIDS, IA
EPA ID NO. IAD005277256

TES IX
FINAL REPORT

PREPARED FOR:

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION VII
RCRA BRANCH, IOWA SECTION

Work Assignment No.	:	RO7009
EPA Region	:	7
Date of Inspection	:	May 5, 1992
Date Prepared	:	February 18, 1993
Contract No.	:	68-W9-0006
Prepared By	:	B&V Waste Science and Technology Corp.
Inspectors	:	Mike MacLeod Todd Dudley
Contractor Project Manager	:	Jerome Frizzell
Telephone No.	:	913-338-6580
EPA Primary Contact	:	Tran Tran
Telephone No.	:	913-551-7884

PRE-INSPECTION FORM

FACILITY NAME.....: WAYNE MANUFACTURING COMPANY

FACILITY ADDRESS.....: 5051 Williams Blvd
Cedar Rapids IA 52404

FACILITY EPA ID #.....: IAD005277256

INSPECTOR NAME, COMPANY, & SIGNATURE.....: Mike MacLeod, BVWST; Michael R. MacLeod

INSPECTION TYPE..(circle)..: CEI CLOS (FOLLOWUP)

DATE OF INSPECTION.....:

DATE FILE REVIEW COMPLETED BY INSPECTOR.....: 5-1-92

COMPLIANCE OFFICER NAME, SIGNATURE, & DATE.....: Tran Tran TNT 4/30/92

PERMIT WRITERS NAME, SIGNATURE, & DATE.....: Ken Herstowski 4/30/92

ATTORNEY NAME, SIGNATURE, & DATE.....: NA TRAN

SPECIFIC INSTRUCTIONS REGARDING INSPECTION

1) Evaluate waste stream and determine generator status. Obtain a detailed process description

2) Determine who made haz. waste determinations and how

3) Obtain a detailed description of evaporation unit. Determine definition of waste stream.

4) Review compliance with violations cited on 6/12/90 NOV

a. Personnel training plan - check for major requirements

b. biennial report for 1991

c. Contingency Plan - Check for major requirements

(over)

d. Aisle Space

e. Container labelling

f. Container dating

g. Weekly inspections

h. Access to communications

.

5) Determine generation rate and total storage time for wastes currently stored, and wastes stored at time of last CEI (6/12/90)

6) Obtain copies of hazardous waste manifests (as many as possible from August 1988 to April 1992).

Because facility is only required to maintain copies of manifests at facility for 3 yrs., I called TransTrol and told her we may not be able to obtain manifests filled out prior to April 1989.

MDM - 4/30/92 ; 1620

RESOURCE CONSERVATION AND RECOVERY ACT
FOLLOW-UP INSPECTION
FOR
WAYNE MANUFACTURING COMPANY (WMC)

FACILITY

Wayne Manufacturing Company (WMC)
5051 Williams Blvd.
Cedar Rapids, Iowa 52404
EPA ID Number: IAD005277256
(319) 396-7010

INSPECTION DATE

May 5, 1992

PARTICIPANTS

Wayne Manufacturing Company
Mr. [redacted] - Foreman
Ms. [redacted] - Employee
Mr. [redacted] - Employee

B&V Waste Science and Technology Corp.
Mr. Michael MacLeod, Geological Engineer (913) 338-6587
Mr. Todd Dudley, Chemical Engineer (913) 338-6665

Table of Contents

Report is 18 pages in length

APPENDICES

1.0 Introduction

PRC Environmental Management, Inc. (PRC) received work assignment R07009 from the U.S. Environmental Protection Agency (USEPA) under contract number 68-W9-0006 (TES 9). B&V Waste Science and Technology Corp. (BVWST), under subcontract to PRC, was tasked to perform a RCRA Follow-up Enforcement Inspection at Wayne Manufacturing Company (WMC) in Cedar Rapids, IA. Upon arrival at the WMC facility, I met with Mr. [redacted], foreman at WMC and explained the purpose of the Follow-up Enforcement Inspection. Mr. [redacted] stated that Mr. [redacted], owner and president of WMC, was out of town, and that Mr. Wolf and the WMC secretary handled most of the facility regulatory compliance and document filing issues at WMC. I presented Mr. [redacted] with letters of credentials (Appendix A). I pointed out that the letters of credentials stated the inspectors authority to perform the inspection under Section 3007 of RCRA. I then explained confidential business information (CBI) claim procedures as specified in 40 CFR Part 2, and presented Mr. [redacted] with pages 1 and 2 of the CBI document (Appendix B). Mr. [redacted] read the CBI forms and signed them as acknowledgement of receipt. I showed Mr. [redacted] the third page of the CBI form (Appendix B) and the Receipt for Samples and Documents form (Appendix B) and explained that they would be completed at the conclusion of the Follow-up Inspection. At the conclusion of the Follow-up Inspection, I presented the final page of the CBI form and the Receipt for Samples and Documents form and Mr. [redacted] read them and signed them acknowledging receipt. I presented Mr. [redacted] with the Preliminary Findings of Inspection Form (Appendix C) and explained the items observed which were presented on the form.

2.0 Follow-up Inspection Procedures

The purpose of conducting this Follow-up Inspection was to: (1) determine compliance at the WMC facility regarding areas that were previously found in non-compliance, (2) determine compliance at the WMC facility regarding enforcement actions which have taken place, and (3) gather information to supplement the previous inspections. The specific objectives of the Follow-up Inspection at the WMC facility were assigned to me from discussions between myself and Ms. Tran Tran and Mr. Ken Herstowski of USEPA regarding past and current potential areas of non-compliance at WMC. WMC has notified USEPA as a hazardous waste transport, storage, and disposal facility (TSDF) for container storage. Hazardous wastes stored at the WMC facility are only those generated at the facility. WMC has an interim status hazardous waste storage area at the facility. The WMC facility has been inspected by USEPA three times since 1986. The dates of the inspections were August 26, 1986, May 11, 1988, and June 12, 1990. A Notice of Violation (NOV) was issued at the August 1986 inspection for manifests without a five digit number, failure to label containers of hazardous waste, and failure to conduct container storage area inspections. A NOV was issued at the May 1988 inspection for failure to label hazardous waste containers; failure to maintain placards to offer a transporter; no personnel training plan; no internal communication or alarm system; inadequate arrangements with local authorities; no contingency plan; no waste analysis plan; inadequate security; no written inspection schedule or log; no written operating record; no written closure plan; and no financial assurance. An NOV was issued at the June 1990 inspection for no personnel training plan; no contingency plan; failure to submit a 1989 Biennial Report; failure to place the date on containers of hazardous waste; failure to label containers of hazardous waste; failure to conduct weekly inspections; inadequate aisle space in the storage area; and no access to internal communication system. Specific instructions for this WMC Follow-up Inspection were:

(1) Determine WMC's generator status based on an evaluation of process waste streams. I was to obtain detailed process descriptions.

(2) Determine how hazardous waste determinations were made, and who made the determinations.

(3) Obtain a detailed description of the evaporation unit (Furnace No. 1) at WMC, and define the waste stream.

(4) Inspect the facility to determine if WMC is in compliance with violations cited during the previous CEI. Specific areas of concern are:

a. Personnel training plan--Check to see that WMC has developed a personnel training plan and review the major components of the plan.

b. Biennial Report--Find out if WMC submitted a Biennial Report for 1991.

c. Contingency Plan--Check to see that WMC has developed a contingency plan and review the major components of the plan.

d. Aisle Space--Check to see that WMC has maintained adequate aisle space in all storage areas.

e. Container Labelling--Check to see that WMC has labelled all containers holding hazardous waste properly.

f. Container Dating--Check to see that all WMC hazardous waste containers are dated.

g. Weekly Inspections--Check weekly inspection records.

h. Emergency Communications System--Check to see that WMC has access to communication systems at the hazardous waste storage area.

(5) Determine the generation rate and total accumulation time for wastes currently stored onsite, as well as wastes stored onsite at the time of the previous inspection.

(6) Obtain copies of hazardous waste manifests filled out by WMC for the past three years.

Discussions during the inspection consisted of facility operations, wastes generated, waste management practices, and a tour of the facility. The above listed objectives were addressed during the inspection and are discussed in Section 3.0 and 4.0. The specific objectives of the inspection were explained to Mr. [redacted] at the time of the inspection. After introductions were completed and access to the facility was granted, I read the facility process description from the previous CEI (06/12/90) performed by USEPA at the WMC facility to Mr. [redacted] to determine if facility processes and operations have changed. Mr. [redacted] stated that operations had not changed significantly from the description presented in the previous CEI. Specific differences pointed out by Mr. [redacted] are summarized in Section 3.0 of this report. Based on discussions with Mr. [redacted] it appears that WMC is a large quantity

generator of spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (F011), that this wastewater is treated in two thermal treatment units, sludge from this thermal treatment results in generation of between 100 kg and 1000 kg of F012 per month, and that this F012 waste is stored onsite in an interim status hazardous waste storage area prior to shipment offsite for disposal.

Photographs were taken by myself during the inspection to document pertinent visual observations (Appendix C). Other documents copied during this Follow-up Inspection are included in Appendices D through K.

3.0 Facility Description

This section includes general information and a brief regulatory history of operations, and waste streams at the WMC facility.

3.1 General Information

Mr. [redacted] stated that WMC fabricates metal tubing handles and heat treats electrical circuit breaker parts in a series of immersion tanks. A facility layout map is included in Appendix F. During the Follow-up Inspection interview, Mr. [redacted] reviewed process flow diagrams I developed for accuracy. The process flow diagrams for fiberglass hammer handle production, metal tubing handle fabrication and the heat treating of electrical circuit breaker parts are shown in Appendix G (Figures 2, 3, and 4, respectively). The WMC facility processes are discussed in more detail, as follows:

METAL TUBING HANDLE FABRICATION

- Metal tubing handles are fabricated in a hydraulic press. Excess hydraulic oil from the hydraulic press is allowed to catch in a container beneath the hydraulic press. When the container is full the oil is placed in the hydraulic press for reuse.
- After the metal tubing is fabricated, the metal tubing handles are carbonized in a neutral salt solution containing sodium and potassium fluoride. The carbonization is done at 1660°F in Furnace No. 4 by adding fine graphite to form a solution of carbon monoxide and carbon dioxide.
- The carbonization is followed by an oil quench using Park Chemical AAA at approximately 125-140°F to cool the metal handles. This oil quench bath has never been replaced. When the oil in the tank becomes low, more oil is added to the tank. Mr. [redacted] stated that this operation has occurred for approximately 15 years, and that WMC has never disposed of waste quenching oil.
- Following the oil quench, the metal handles are rinsed in two 55 gallon water baths containing soap to remove any oil. The oil and water are separated, and the oil is reused in the oil quench bath. The separated water containing soap is evaporated in Furnace No. 4. No hazardous waste determination has ever been made on the used oil since it has never been disposed of as a hazardous waste.

- After rinsing in the water containing soap, the metal handles are tempered in a sodium nitrate salt solution at about 500°F. Upon exhaustion of the sodium nitrate solution, this solution is sent to Furnace No. 4 for reheating and subsequent reuse.
- After tempering in the sodium nitrate salt solution, the metal handles are quenched in a 55 gallon open water bath held at 70°F and 1 atm. Upon depletion of the water quenching bath (water becomes saturated with sodium nitrate), the water is evaporated in Furnace No. 4 (non-cyanide evaporation unit).
- Upon quenching, the metal handles are cleaned with a wire brush. The solution remaining is sent to the water displacement tank for separation of the oil and water in solution. The separated oil is reused for quenching.
- Upon completion of these steps, the metal handles, are shipped off-site to Rock Island plating in Rock Island, IL for final plating.

HEAT TREATING OF ELECTRICAL CIRCUIT BREAKER PARTS

Mr. [redacted] stated that electrical circuit breaker parts are heat treated in a series of immersion tanks, as follows:

- Circuit breaker parts are placed in a 1550°F cyanide salt bath. (Furnace No. 1) (Photograph No. 9). The parts are kept in the bath for 30 minutes to allow for a 4,000-6,000 case depth (measurement of metal hardness) and are kept in the bath for 60 minutes to allow for a 10,000 to 12,000 case depth. The case depth varies depending on client requests.
- Upon exiting the 1550°F cyanide salt bath, the circuit breaker parts are immersed in a 55 gallon oil quenching bath held at 125-140°F. (Photograph No. 10) The oil quenching bath is heated to 125°F daily by placing a super heated metal weight in the 55 gallon container. The oil used in this container is replenished on an as needed basis.
- After quenching in the oil bath, the circuit breaker parts are immersed in a series of four rinse water baths each held at 70°F. The first rinse water bath has a volume of 55 gallon and removes approximately 70% of the cyanide from the circuit breaker parts. The second rinse water bath removes approximately 30% of the cyanide from the circuit breaker parts. Rinse water baths 3 and 4 remove any remaining residue amounts of cyanide. The rinse water containing cyanide from baths 1 and 2 (approximately 150 gallons) are run through Evaporation No. 1 approximately once a week. The

rinse water containing cyanide is stored in drums prior to treatment in Evaporator No. 1. The 150 gallons of rinse water containing cyanide is placed in the evaporator for approximately 48 hours. Heat is supplied from gasoline at approximately 212°F. The product remaining after 48 hours is approximately 20 gallons solidified cyanide (No analysis has been done on this 20 gallons solution). The product is taken to furnace number 2 which is held at 1500-1600°F. The solidified product is baked to remove any moisture and allowed to dry into cakes. The circular cakes are approximately 6 inches high and a diameter of approximately 20 inches. When four or five circular cakes have been generated, the cakes are placed in a 55 gallon container. The void spaces are filled by slurry solution from Furnace No. 2 that has not been allowed to dry. The weight of the 55 gallon drum is approximately 800 pounds. Approximately one drum is produced per month. The drums are taken offsite as hazardous waste (F012) by Laidlaw Environmental Services (ILD980502744). Laidlaw disposes of the wastes at their Picatonica, IL facility (ILD98052744).

- After the water quenching baths, the circuit breaker parts are placed in a final oil bath which coats the parts.

FIBERGLASS HAMMER HANDLES

Fiberglass hammer handles are made by pull-truding fiberglass filaments through a mix of resins, styrenes and pigments. The handles are then formed in a heat-set mold. Mr. [redacted] said that after the fiberglass handles are cooled, they are trimmed to remove excess fiberglass. Mr. [redacted] said the excess fiberglass tailings are placed in 30-gallon pails (30 to 60 gallons per week) and disposed of with municipal trash. I obtained a copy of the MSDS for the resins used by WMC to manufacture fiberglass hammer handles (Appendix K).

Approximately 20 people are employed at WMC. Employees work three shifts per day, 5 days per week. Most production is on the first shift, with less on the second shift. Only one production employee works on the third shift.

Upon entering the facility, I detected a strong odor which Mr. [redacted] said was probably styrene from the fiberglass hammer handle manufacturing process. During the tour of the facility I observed that the inside of the building was dark and crowded with machines, various types of equipment, and containers of products and trash. Access through the facility was limited at many locations. Quenching solutions were in open, unsecured containers along ailseways and doors to the furnaces were

open. At least two employees were smoking while working in the manufacturing areas. In general, working conditions, in the facility appeared to be poor.

3.2 Regulatory History

WMC submitted a Notification of Hazardous Waste Activity form to USEPA on August 5, 1980. At that time, WMC stated on the form that it is a TSD facility. WMC stated on the form that hazardous waste generated at the facility was listed waste F012. The WMC facility has been inspected by USEPA three times since 1986. The dates of the inspections were August 26, 1986, May 11, 1988, and June 12, 1990. A Notice of Violation (NOV) was issued at the August 1986 inspection for manifests without a five digit number, failure to label containers of hazardous waste, and failure to conduct container storage area inspections. At the time of the August 1986 CEI, the WMC facility was inspected as a small quantity generator. At the time of May 1988 CEI, the facility was inspected as an interim status TSD. A NOV was issued at the May 1988 inspection for failure to label hazardous waste containers; failure to maintain placards to offer a transporter; no personnel training plan; no internal communication or alarm system; inadequate arrangements with local authorities; no contingency plan; no waste analysis plan; inadequate security; no written inspection schedule or log; no written operating record; no written closure plan; and no financial assurance. At the time of the June 1990 CEI, the facility was again inspected as an interim status TSD. A NOV was issued a the June 1990 inspection for no personnel training plan; no contingency plan; failure to submit a 1989 Biennial Report; failure to place the date on containers of hazardous waste; failure to label containers of hazardous waste; failure to conduct weekly inspections; inadequate aisle space in the storage area; and no access to internal communications system.

4.0 Findings and Observations

This section summarizes findings and observations made during the Follow-up Inspection at WMC. The section is divided into two parts to present findings and observation made during the visual inspection and the document review portions of the follow-up inspection.

4.1 Visual Inspection Findings

I made the following observations during the visual portion of the follow-up inspection:

- Ms. [redacted] of WMC told me that hydraulic oil used in the metal handle hydraulic press is recirculated through a meshlike filter (fabric). Ms. [redacted] stated that she cleans the filters daily by blowing air through them. Ms. [redacted] also said that when filters become too saturated with filtered dirt they are disposed of in the trash dumpster. Ms. [redacted] said filter solids from the filters are thrown away in the dumpster. Mr. [redacted] stated solid waste from the dumpster is disposed with general trash at a local landfill. Mr. [redacted] told me that solvent instead of air is occasionally used to clean the filters. Mineral spirits are the solvents used for this process. I did not obtain a copy of the MSDS for the solvent.
- I observed a floor drain collector sump in the heat treat room which contained liquids (shown in Appendix F) (Photograph No. 4). I observed the floor in the heat treat room to be sloped toward the drain. Mr. [redacted] told me that the drain collects spills and that the drain had been plugged in July or August of 1991, and that approximately 5 to 10 gallons of waste (quenching oil, water, cyanide residues, etc.) is pumped from the drain each day. Mr. [redacted] said that the floor drain wastes are screened for cyanide content using a litmus-type test. If the floor drain wastes contain cyanide, the liquid is poured into the cyanide evaporation unit. If the floor drain waste does not contain cyanide, the waste is poured into the non-cyanide evaporation unit. Mr. [redacted] told me that prior to July or August 1991, the floor drain was not plugged and that liquids accumulated in the drain discharged to a septic tank field and then eventually to a creek to the southwest of the WMC facility.

- I observed one 55-gallon container in the heat treat room which Mr. [redacted] said contained oil skimming from the oil/water separator. Mr. [redacted] said the container was approximately one-quarter to one-third full, and pointed to the fluid level in the container while a photograph was taken (Photograph 11). Mr. [redacted] stated that no hazardous waste determination had been made on this solution. I observed no markings or labels on the container at the time of this inspection.
- I observed four 55-gallon drums outside the heat treat room, and adjacent to the non-cyanide evaporation unit. Mr. [redacted] said that all four drums were full and I confirmed this by tapping on the sides of the drums. I observed two of the drums marked (handwritten) as "Hazardous Waste Water", and two of the drums marked (handwritten) as soap water and rinse water (Photographs No. 19). Mr. [redacted] said that the hazardous wastewater drums were from Furnace No. 1 and the other two drums were from washout of Furnace No. 4. Mr. [redacted] also said that all four drums had been placed outside on the morning of the Follow-up Inspection and that each are normally stored inside the facility. Mr. [redacted] said contents from the two hazardous waste water drums would be poured into the cyanide evaporation unit (other side of the facility), and contents from the other two drums would be poured into the non-cyanide evaporation unit. I observed no labels, waste codes, or dates on the hazardous waste containers on the day of the inspection, and the hazardous waste containers were not at or near the point of generation. (Photograph No. 19).
- I observed two 55-gallon drums in the product receiving area in the southeast corner of the WMC facility (Photograph No. 21). The words "Hazardous Waste Water" were handwritten on the container. Mr. [redacted] (WMC employee) told me that the drums had been filled and placed in this area approximately 10 days before the inspection. I confirmed the drums were full by tapping on the side. Mr. [redacted] also stated that the drums contained waste water from the oil/water separator and that the water would be poured into the cyanide evaporation unit. I observed no labels on the containers showing date of accumulation or waste code and the containers were not at or near the point of generation.

- I observed eight 55-gallon drums outside the main facility building (south side), which had handwriting on them stating each contained soapy wash water and rinse water from Furnace No. 4 (Figure 1 and Photograph No. 22). Mr. [redacted] said that all 8 drums were full containing the liquids written on the containers which I confirmed by tapping on each drum. Mr. [redacted] also said that these containers had been stored in this location for approximately two weeks and would be poured into the non-cyanide evaporation unit. I asked Mr. [redacted] if a hazardous waste determination had ever been made on the wash waters from Furnace No. 4. He said that WMC assumed the material was non-hazardous based on process knowledge because it never came in contact with cyanide.
- I observed a total of six 55-gallon drums outside the main facility building (southside) which had handwriting on them stating they contained "Hazardous Waste Water" (Figure 1 and Photograph No. 22). Four of the drums were being stored adjacent to the eight drums of wash and rinse water from Furnace No. 4 (Photograph Nos. 22 and 24), and the other two drums were being stored adjacent to the cyanide evaporation unit (Photograph No. 23). Mr. [redacted] said that the first four drums contained hazardous waste water from Furnace No. 1 and were full. I confirmed each was full by tapping on the side. Mr. [redacted] said these drums were placed at this location approximately one week before the inspection. The other two drums also contained hazardous waste water from Furnace No. 1 and were filled and placed outside approximately two weeks before the inspection. Mr. [redacted] also said that the two drums of hazardous waste water would be poured into the cyanide evaporation unit next. I did not observe any hazardous waste labels showing the date of accumulation or waste code of the contents of any of these six drums. I also observed the drums to not be at or near the point of generation.
- I observed two 55-gallon containers and one 30-gallon container, outside the main facility building (southside) which had handwriting on them stating each contained "Hazardous Waste." Mr. [redacted] said the drums were full, and contained waste insulation and ceramic from Furnace No. 1 which was contaminated with cyanide. I confirmed each drum was full by tapping on the sides. Mr. [redacted] initially said the drums had been stored at this location since February 1992, but Mr. [redacted] said the drums had been filled

and placed at this location approximately one week before the inspection. I did not observe any hazardous waste labels showing the date of accumulation or waste code of the contents of these drums.

- I observed five 55-gallon drums adjacent to the cyanide evaporation unit which had handwriting on them stating they contained hazardous waste. Mr. [redacted] said the drums contained waste solids from the cyanide evaporation unit and that these solids would be taken to Furnace No. 2 to be remelted prior to final accumulation for offsite disposal. I tapped on all five drums and confirmed that they were full. Mr. [redacted] and Mr. [redacted] stated that these drums had been stored at this location for the preceding few weeks. I observed one of the containers to have the date 3/30/92 written on the side. None of the other containers had a date of accumulation marked on them, and I did not observe any hazardous waste labels showing waste codes on the any of the drums.
- I observed six 55-gallon drums of hazardous waste in the WMC interim status hazardous waste storage area. Mr. [redacted] stated that all six drums were full, and contained dried "cakes" of cyanide waste. Two of the drums were dated November 21, 1991, and the other four drums were dated March 1 and 11, February 14, and April 12, 1992. I observed a fire alarm just outside the storage room, but I did not observe a communication system, such as an alarm or phone. Mr. [redacted] told me that USEPA has told WMC that the "buddy system" is an adequate substitute for an alarm system, so that is the method WMC uses. I asked Mr. [redacted] who accompanies him into the hazardous waste storage area during his weekly inspections. He told me that he asks available employees in the facility to come with him. I observed several boxes and pieces of equipment in the interim status storage room with the stored hazardous wastes, making it difficult to move around the room and between containers.

4.2 Document Review Findings

I made the following findings and observations during the document review portion of the inspection.

- Mr. [redacted] told me that all WMC employees have been through hazardous waste training since the last CEI. Mr. [redacted] said that the manuals

associated with this training are kept at the facility, but that he was not sure where they were at the time of the inspection. He was unable to find them during the inspection. I asked Mr. [redacted] if WMC had developed a WMC facility specific personnel training plan. Mr. [redacted] said that a training plan was being developed by Environmental Associated Services and Engineering Inc. (EASE) out of Rock Island, IL. He was unable to locate and therefore provide a copy of the personnel training plan or employee records associated with the plan to me at the time of the inspection. I suggested to Mr. [redacted] that WMC obtain a copy of the facility personnel training plan and employee records and submit them to Ms. Tran Tran of USEPA within 30 days of the inspection. I wrote a memorandum to this effect which Mr. [redacted] and I both initialed and dated. A copy of this memorandum is included in Appendix E. A copy of this memorandum was also left at the WMC facility.

- Mr. [redacted] told me that to his knowledge a contingency plan has also been developed for the WMC facility by EASE. However, he was unable to provide a copy of the contingency plan to me at the time of the inspection. I suggested to Mr. [redacted] that a copy of the contingency plan be submitted to Ms. Tran Tran of USEPA within 30 days of the inspection. Reference to the contingency plan was made on the memorandum in Appendix E.
- I asked Mr. [redacted] if WMC submitted a 1991 Biennial Report. He said that he thought they did. However, Mr. [redacted] was unable to locate and therefore, provide a copy of, the 1991 Biennial Report to me at the time of the inspection. I asked Mr. [redacted] if he could find any type of verification or certification that the Biennial Report had been sent, but he was unable to provide any such certification at the time of the inspection. I suggested to Mr. [redacted] that if the 1991 Biennial Report for WMC was not submitted to USEPA, one should be submitted as soon as possible. Otherwise, I suggested to Mr. [redacted] that a copy of WMC's 1991 Biennial Report be maintained at the facility, and that certification of delivery of the 1991 Biennial report be submitted to Ms. Tran Tran of USEPA within 30 days of the inspection. This suggestion is referenced in the memorandum in Appendix E.
- Mr. [redacted] stated records of weekly inspections are kept on the facility waste operating log to track wastes shipped offsite by WMC. I observed the log to be comprised of barrel numbers, accumulation start dates, dates

containers are filled, and batch numbers. I obtained a copy of WMC's weekly inspection log of the interim status storage area from Mr. [redacted] (Appendix I). Mr. [redacted] told me that he conducts the weekly inspections and that the weekly inspections are performed to check inventory in the interim status storage area, and confirm that the drums of waste in the interim status storage area match the operating record. I asked Mr. [redacted] who accompanies him on weekly inspections so that he complies with the WMC facility "Buddy System" communication requirement. Mr. [redacted] told me that he asks random available employees working near the area to accompany him on the weekly inspections. Mr. [redacted] stated that he checks for leaking or open containers and adequate aisle space during his weekly inspections of the interim status storage area. Mr. [redacted] stated that he does not know of any written weekly inspection plan that specifies which areas should be inspected. Mr. [redacted] stated that the weekly inspection record does not include any of the other hazardous waste accumulation areas at WMC and the inspection record is for the interim status storage area only. Mr. [redacted] stated that all WMC employees are familiar with the differences between WMC's hazardous and non-hazardous wastes, and that the employees know to handle and check hazardous waste containers in all parts of the facility with care.

- I did not review the weekly inspection records thoroughly at the facility during the inspection. A copy of the weekly inspection record is submitted in this report as it was given to me during the inspection (Appendix I). I conducted a brief review of the weekly inspection record.
- I obtained copies of four hazardous waste manifests used for hazardous waste shipments from WMC between November 1988 and October 1991. Copies of these manifests are included in Appendix J. Mr. [redacted] said that these manifests were for all hazardous waste shipments made from WMC during this time period. I did not review these manifests thoroughly during the inspection at the facility.
- Although I was not specifically asked to obtain a copy of WMC's hazardous waste operating record, the record is included in Appendix I since it is part of WMC's weekly inspection record. I observed the hazardous waste operating record to include the barrel number, accumulation start date, the date the container was filled, and the waste batch number.

4.3 Summary of Other Findings and Observations

Objective number 5 (Section 2.0) of this Follow-up Inspection was for me to determine the generation rate and total accumulation time for wastes currently stored onsite, as well as wastes stored onsite at the time of the previous CEI (June 1990). I made an approximate determination through my discussions with Mr. [redacted] and review of the WMC operating record and hazardous waste manifests.

Mr. [redacted] said that WMC generates approximately 150 gallons of hazardous waste wash water from the electrical circuit breaker parts treatment process per week (600 gallons or 2040 kilograms per month). Mr. [redacted] said all of this waste is collected and accumulated in 55-gallon containers at the facility. The hazardous waste water is accumulated onsite for up to two weeks, and then poured from the 55-gallon containers into the cyanide evaporation unit for thermal treatment. The solids from the cyanide evaporation unit are removed from the unit after 48 hours and placed in 55-gallon containers. According to Mr. [redacted] each batch of solids from the evaporation unit fills approximately one third of a 55-gallon drum (20 gallons). The solids from the evaporation unit are taken to Furnace No. 2 for more thermal treatment. The final quantity of hazardous waste generated per month after both thermal treatment phases is 55-gallons of F012 (quenching waste water treatment sludges from metal heat treating operations where cyanide is used in the process). This waste is the hazardous waste shipped offsite from WMC. Therefore, the hazardous waste generation rate at WMC prior to treatment is over 2000 Kg/month, and the rate of treated hazardous waste which is shipped offsite averages is approximately 360 Kg per month (Mr. [redacted] said that each drum of F012 weighs approximately 800 pounds). As stated in Section 4.1, ten 55-gallon drums of hazardous waste water and five 55-gallon drums of hazardous waste solids from the cyanide evaporation unit were being accumulated prior to treatment at WMC. Mr. [redacted] said that Mr. [redacted] makes all hazardous waste determinations (past and present) based on process knowledge and subsequent laboratory analysis.

It was stated in the previous CEI (June 1990) that there were 10 full 55-gallon drums of hazardous waste solid residues awaiting offsite disposal and three other partially full 55-gallon drums (all three combined would fill on drum) of the same material. Mr. [redacted] said, and the WMC operating record confirmed that the most recent hazardous waste shipment from WMC prior to the June 1990 inspection had been on November 16, 1988. Mr. [redacted] also stated that accumulation of the hazardous wastes observed onsite at the time of the June 1990 CEI would have

started accumulating after 11/16/88. Mr. [redacted] stated, and the hazardous waste operating record confirmed that the next hazardous waste shipment from WMC after the June 1990 CEI was March 29, 1991. Mr. [redacted] said that 10 full drums of hazardous waste solids residue (F012), including the drums observed during the June 1990 CEI were shipped offsite on March 29, 1991. Therefore, the 10 drums of hazardous waste solids awaiting offsite disposal during the June 1990 CEI were stored onsite greater than 9 months, and hazardous wastes to be shipped offsite for disposal had started accumulation onsite since some time after November 16, 1988 (28 months). I observed that the 10 drums of hazardous waste stored onsite were not stored in the RCRA interim TSDF accumulation area.

5.0 Potential Problems

This section presents the potential problems identified on the Preliminary Findings of Inspection Form during this Follow-up Inspection.

- Hydraulic oil used in the metal hammer handle press is recirculated through a meshlike filter (fabric). Solids from the filters are removed from the filters by WMC by either blowing air through them, or occasionally rinsing solvent (mineral spirits) through them. All filter cleaning wastes and dirty filters are thrown away in the facility dumpster and hauled to a sanitary landfill. Ms. [redacted] stated that a hazardous waste determination has never been made of the dirty filters or filter cleaning wastes. I did not obtain a copy of the MSDS for the solvent.
- I observed a total ten 55-gallon drums of hazardous waste water accumulated at various locations within the WMC facility (as identified in Section 4.0). All of these drums had the words "Hazardous Waste Water" written on them, but none of the drums were dated, and none of the drums were stored in the RCRA interim TSDF accumulation areas where weekly inspections are conducted.
- I observed five 55-gallon drums of hazardous waste solids from the cyanide evaporation unit being accumulated near the cyanide evaporation unit. Mr. [redacted] stated that these drums had been stored at this location for approximately two weeks. All of the drums had the words "hazardous waste" written on them, but only one drum was dated. The area where the drums were being accumulated is not inspected weekly by WMC.
- I observed three containers of waste insulation and ceramic from Furnace No. 1 which WMC had designated and labelled as hazardous waste. None of the containers had dates on them. They were not being accumulated in the RCRA interim TSDF accumulation area and were not being inspected weekly.
- Mr. [redacted] was unable to provide me with a copy of the facility's contingency plan, personnel training plan, and 1991 Biennial Report during the Follow-up Inspection.
- WMC conducts thermal treatment of cyanide contaminated wastes. WMC accumulates cyanide contaminated waters which the facility designates as "hazardous waste water" in 55-gallon containers. The hazardous wastewater

is removed from the containers by pouring the contents into Evaporation Unit No. 2. Solids contaminated with cyanide are removed from Evaporation Unit No. 2, placed in containers and designated as hazardous waste by the facility. WMC then pours molten cyanide salts from Evaporation Unit No. 2 to completely fill the drums. This waste is then stored in WMC's interim status storage unit and shipped offsite as hazardous waste (F012). I was unable to locate the Part A permit application in EPAs files during the pre-inspection file review. I requested a copy of the Part A permit application from WMC during the inspection but WMC could not locate it. I was therefore not able to determine if thermal treatment was an interim status activity.

- I observed a floor drain collector sump in the heat treat room which contained liquids. I observed the floor in the heat treat room to be sloped toward the drain. Mr. [redacted] told me that the drain collects spills and that the drain had been plugged in July or August of 1991, and that approximately 5 to 10 gallons of waste (quenching oil, water, cyanide residues, etc.) is pumped from the drain each day. Mr. [redacted] said that the floor drain wastes are screened for cyanide content using a litmus-type test. Mr. [redacted] stated that if the floor drain wastes contain cyanide, the liquid is poured into the cyanide evaporation unit. If the floor drain waste does not contain cyanide, the waste is poured into the non-cyanide evaporation unit. Mr. [redacted] told me that prior to July or August 1991, the floor drain was not plugged and that liquids accumulated in the drain and discharged to a septic tank field and then eventually to a creek to the southwest of the WMC facility.
- Mr. [redacted] stated that USEPA has told WMC that the "buddy system" is an adequate substitute for an alarm or communication system in the WMC interim status storage area or other hazardous waste accumulation areas at the facility. Mr. [redacted] was unable to provide me any documentation proving USEPA stated that the "buddy system" is an adequate system.
- During the Follow-up Inspection, is appeared that working conditions within the facility were unsafe. I suggest that an OSHA inspection be conducted at WMC.

Appendix A

Inspector's Letters of Credentials

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

RCRA Compliance Evaluation Inspections
Credentials and Designation

To Whom It May Concern:

This certifies that Michael D. MacLeod, whose signature appears below, is designated an authorized contractor of the U.S. Environmental Protection Agency for the purpose of conducting the Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspections (CEI) for the period February 1, 1992 through December 31, 1992. This person is hereby authorized to conduct these official investigations pursuant to Section 3007 of RCRA.

Section 3007(b) of RCRA and 40 CFR Part 2 define the Agency's policies regarding protection of trade secrets and confidential information.

Age:
Height:
Weight:
Color of Hair:
Color of Eyes:

Michael D. MacLeod
Designated Contractor
B&V Waste Science and
Technology, Inc.

Michael J. Sanderson
Chief, RCRA Branch
Waste Management Division
U.S. Environmental Protection
Agency-Region VII

RECYCLE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

RCRA Compliance Evaluation Inspections
Credentials and Designation

To Whom It May Concern:

This certifies that W. Todd Dudley, whose signature appears below, is designated an authorized contractor of the U. S. Environmental Protection Agency for the purpose of conducting the Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspections (CEI) for the period November 1, 1991 through January 1, 1992. This person is hereby authorized to conduct these official investigations pursuant to Section 3007 of RCRA.

Section 3007(b) of RCRA and 40 CFR Part 2 define the Agency's policies regarding protection of trade secrets and confidential information.

Age:
Height:
Weight:
Color of Hair:
Color of Eyes:

W. Todd Dudley
W. Todd Dudley
Designated Contractor
B&V Waste Science and Technology, Inc.

Lynndell Harrington
for Michael J. Sanderson
Chief, RCRA Branch
Waste Management Division
U.S. Environmental Protection Agency-Region VII

RECYCLE

Appendix B

Confidential Business Information and
Receipt for Samples and Documents Forms

U.S. ENVIRONMENTAL PROTECTION AGENCY
RCRA INSPECTION
CONFIDENTIALITY NOTICE

Name and Address of Inspector(s)	Name and Address of Facility
Mike MacLeod Todd Dudley U.S. EPA, Region VII ENSV Division 25 Funston Road Kansas City, Kansas 66115 (BVWST)	Wayne Manufacturing Co. 5051 Williams Blvd. Cedar Rapids, IA 52404
	Owner, Operator, or Agent in Charge [redacted]
	Title Owner
	Address Shown Above
Name of Individual to Whom Notice Given [redacted]	Title: FOREMAN / Date: 5-5-92

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 U.S.C. 552; EPA regualtions issued thereunder, 40 CFR Part 2; and the Resource Conservation and Recovery Act, Section 3007, as amended. EPA is required to make inspection data available in response to FOIA requests, unless the Administrator of the Agency determines that the data contains information entitled to confidential treatment.

Any or all of the information collected by EPA during the inspection may be claimed confidential, if it relates to trade secrets or commercial of financial matters that you consider to be confidential. If you make claims of confidentiality, EPA will disclose the information only to the extent, and by the means of the procedures set forth in the regulations (cited above) governing EPA's treatment of confidential information. Among other things, the regulations require that the EPA notify you in advance of publicly disclosing any information you have claimed and certified confidential.

To claim information confidential, you must certify that each claimed item meets **all** of the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. The information is not, and has not been, reasonably obtained without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).

3. The information is not publicly available elsewhere.

4. Disclosure of the information would cause substantial harm to your company's competitive position.

At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time you may make claims that some or all of the information is confidential and meets the four criteria listed above.

RCRA INSPECTION CONFIDENTIALITY NOTICE	Facility
_____	WAYNE MANUFACTURING CO.

If you are not authorized by your company to make confidentiality claims, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials, to the Owner, Operator, or Agent in Charge of your firm, within two days of this date. That person must return a statement, specifying any information which should receive confidential treatment.

This statement from the Owner, Operator, or Agent in Charge should be addressed to:

Mr. David A. Wagoner
Director, Waste Management Division
United States Environmental Protection Agency
726 Minnesota Avenue
Kansas City, Kansas 66101

and mailed by registered, return-receipt requested mail with in seven (7) calendar days of receipt of this Notice.

Failure by your firm to submit a written request that information be treated as confidential, either at the completion of the inspection or by the Owner, Operator, or Agent in charge, within the seven-day period, will be treated by the EPA as a waiver by your company of any claims for confidentiality regarding the inspection data.

To be completed by the facility official receiving this Notice:

I have received and read this Notice.

Name [redacted] _____

Title FOREMAN _____

Signature [redacted] _____

Date 5-5-92 _____

If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the Owner, Operator, or Agent in charge of the company. If there is another company official who should also receive this information, please designate below:

Name _____

Title _____

Address _____

_____

U.S. ENVIRONMENTAL PROTECTION AGENCY
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

REQUEST FOR CONFIDENTIAL TREATMENT

Name of Individual	Title	Date
[redacted]	Owner	5/5/92
Firm Name	Firm Address	
WAYNE MANUFACTURING CO.	5051 Williams Blvd. Cedar Rapids, IA 52404	

Information for which Confidential Treatment is requested:

None.

Acknowledgement of Claimant

The undersigned requests that confidential treatment of the information described be provided in accordance with provisions of the Freedom of Information Act (FOIA), 5U.S.C.552; EPA regulations issued thereunder, 40 CFR Part 2; and the Resource Conservation and Recovery Act (RCRA), Section 3007, as amended. The undersigned further acknowledges that he/she is authorized to make such claims for his/her firm.

The undersigned also certifies that each item described above meets all of the following criteria: (1) The company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures: (2) The information is not, and has not been, reasonably attainable without the company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial of quasi-judicial proceeding; (3) The information is not publicly available elsewhere; and (4) Disclosure of the information would cause substantial harm to the company's competitive position.

Signature (Owner, Operator, or Agent)	Title
[redacted]	FOREMAN
Name of Inspector Title	Inspector's Signature
Michael D. MacLeod; GEOLOGICAL Engineer	Michael D. MacLeod

U.S. ENVIRONMENTAL PROTECTION AGENCY

RECEIPT FOR SAMPLES AND DOCUMENTS

Inspector(s) Name and Address:	Firm Name and Address
Mike MacLeod Todd Dudley U.S. EPA, Region VII ENSV Division 25 Funston Road Kansas City, Kansas 66115 (BVWST)	Wayne Manufacturing Co. 5051 Williams Blvd. Cedar Rapids, IA 52404 Name of Individual [redacted] Title Owner
Date Collected: 5/5/92	Samples were: ☐ PURCHASED ☐ RECEIVED NO CHARGE ☐ BORROWED
Sample Numbers	Amount Paid for Samples
Duplicate Samples Requested: ☐ YES ☐ NO	Method of Payment: ☐ CASH ☐ VOUCHER ☐ TO BE BILLED

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Resource Conservation and Recovery Act.

Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:

1. 38 Photographs of Facility
2. Waste Shipped Off-site / Inspection Log
3. MSDS: AROPOL Q 6944
4. 4 Manifests (Illinois 3601406, Indiana 0268218, IL 02922, IL 4464742)

Signature (Owner, Operator, or Agent)	Title
[redacted]	FOREMAN
Name of Inspector / **Title**	**Inspector's Signature**
Michael D. Macleod; GEOLOGICAL ENGINEER	Michael D. MacLeod

Appendix C

Preliminary Findings of Inspection Form

PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT

FACILITY NAME: WAYNE MANUFACTURING CO.
ADDRESS: 5051 Williams Blvd.
Cedar Rapids, IA 52404
EPA ID NUMBER: IAD005277256 **DATE:** MAY 5, 1992

NOTICE

I am not an employee of the Environmental Protection Agency ("EPA"). I am a contractor for EPA retained to conduct compliance evaluation inspections. I am not speaking on behalf of the EPA.

PRELIMINARY FINDINGS OF INSPECTION

Following is a list of items observed during this inspection which will be reported back to EPA. This is not to be construed as a complete list of observations. However, it would be advisable to examine this partial list of findings and immediately correct any items listed.

Within ten days of today's date please send notification to EPA that actions have been taken to correct any concerns noted below and what those actions may have been. Instructions are on the reverse of this page. Such notice should be submitted to:

James V. Callier, Chief
RCRA/IOWA Section
U. S. EPA Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

1. Personnel training plan not available - will be sent to EPA within 30 days
2. Biennial Report (1991) not available - will be sent to EPA within 30 days
3. Contigency Plan not available - will be sent to EPA within 30 days
4. All hazardous waste containers were labelled as "Hazardous Waste" with a marker.

If you have any questions regarding these findings please contact the RCRA/IOWA Section (913) 551-7058.

The undersigned person hereby acknowledges receipt of a copy of this document and has read the same.

PRINTED NAME: [redacted] **TITLE:** FOREMAN

SIGNATURE: [redacted]

This document was prepared by MICHAEL D. MACLEOD Michael D. MacLeod

Page 1 of 2

INSTRUCTIONS

1. Identify the person(s) responding to these findings on your behalf.

2. Address each numbered item separately, and precede each response with the number of the item to which it responds.

3. For each numbered item, identify all documents consulted, examined, or referred to in the preparation of the response, or that contain information responsive to the finding. Provide true, accurate, and legible copies of all such documents. (If information responsive to an item is available but there are no relevant source documents, you must still provide the information.)

4. For each document provided, indicate on the document (or in some similar manner) the number of the item to which it responds.

5. For each numbered item, identify all persons consulted in the preparation of the response.

6. If information responsive to a finding is not in your possession, identify the person(s) from whom the information may be obtained.

7. If, at any time after you submit your response, you find that any part of the information you submitted is incomplete, false, or misrepresents the truth, you must notify EPA immediately.

8. You must provide a response to a finding even though you consider it confidential information or trade secrets. If you want to make a confidentiality claim covering part or all of the information submitted, identify the material with words such as "trade secret," "proprietary," or "company confidential."

9. EPA will disclose information only to the extent and by the means described in 40 Code of Federal Regulations Part 2, Subpart B., provided that it qualifies as confidential business information.

10. Copies of the Code of Federal Regulations may be obtained from the U.S. Government Bookstores.

PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT

FACILITY NAME: WAYNE MANUFACTURING CO.
ADDRESS: 5051 Williams Blvd.
Cedar Rapids, IA 52404
EPA ID NUMBER: IAD005277256 **DATE:** MAY 5, 1992

PRELIMINARY FINDINGS OF INSPECTION

3. All hazardous waste containers in storage area were dated and had been stored for less than one year.

6. Hazardous waste containers stored near CN^- evaporator were not labelled or dated.

7. No hazardous waste determination made on oil filters from hydraulic press.

8. Weekly inspections have be conducted and documented

9. No hazardous waste determination made on ~~waste~~ wash waters from Furnace #4 MDM 5/6/92

10. Three drums of contaminated ceramic and insulation from furnace 1 which is labelled (handwritten) as hazardous waste. outside the storage area since last week (1 week)

MDM 5/6/92

INITIALS OF RECIPIENT: _____

INITIALS OF PREPARER: MDM 5/6/92

Appendix D

Inspection Photographs

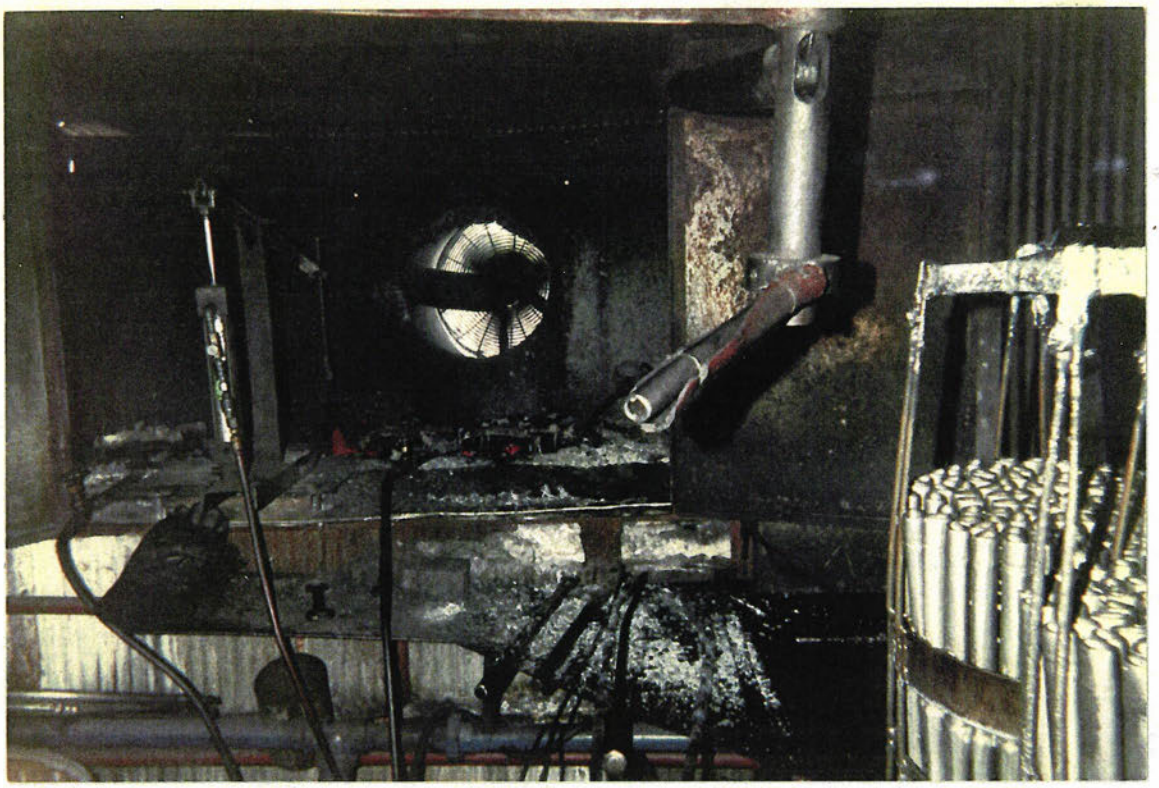


Photo No.: 1 **Direction:** East **Photographer:** Todd Dudley
Date/Time: 5-5-92 11:15 **Description:** Carbonized Neutral Salt Solution

Photo No.: 2 **Direction:** WEST **Photographer:** Todd Dudley
Date/Time: 5-5-92 11:16 **Description:** Oil Quench tank

Photo No.: 3 Direction: Northwest Photographer: Todd Dudley
Date/Time: 5-5-92 11:17 Description: Rinse Water Tank

Photo No.: 4 Direction: WEST (DOWN) Photographer: Todd Dudley
Date/Time: 5-5-92 11:20 Description: Cyanide Floor Sump

Photo No.: 5 Direction: EAST Photographer: Todd Dudley
Date/Time: 5-5-92 11:23 Description: Water tank

Photo No.: 6 Direction: SOUTHEAST Photographer: Todd Dudley
Date/Time: 5-5-92 11:22 Description: Tempered Sodium nitrate solution

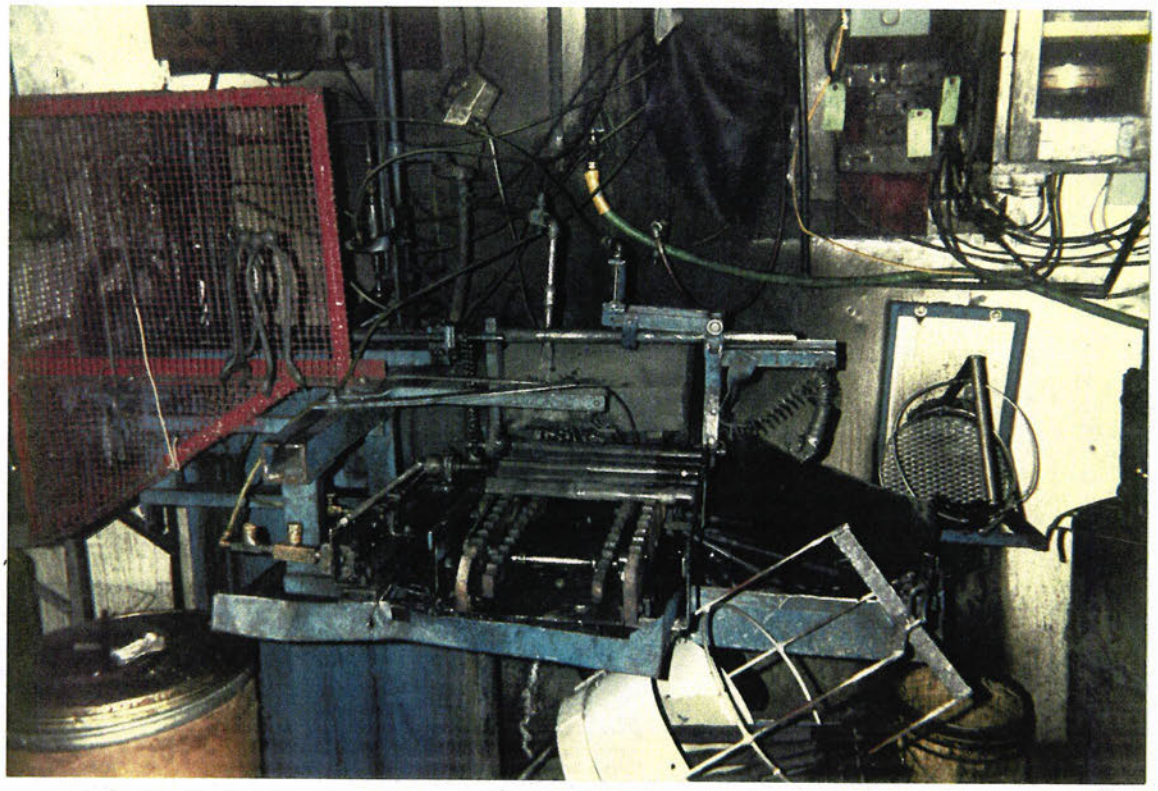


Photo No.: 7 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:25 Description: Pickle/Wire brush system

Photo No.: 8 Direction: East Photographer: Todd Dudley
Date/Time: 5-25-92 11:26 Description: Pickle/Wire brush system

Photo No.: 9 Direction: Northeast Photographer: Todd Dudley
Date/Time: 5-5-92 11:28 Description: Cyanide salt bath

Photo No.: 10 Direction: East Photographer: Todd Dudley
Date/Time: 5-5-92 11:27 Description: Oil quench tank

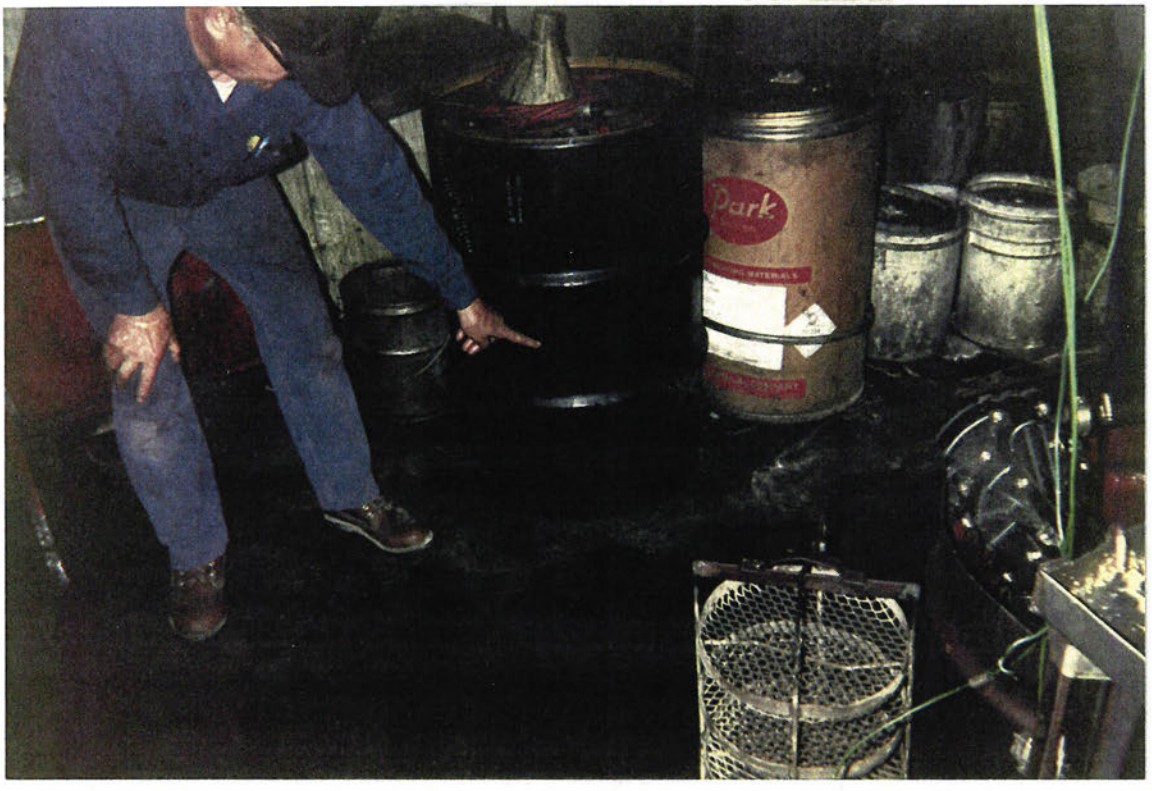


Photo No.: 11 Direction: Northeast Photographer: Todd Dudley
Date/Time: 5-5-92 11:29 Description: Oil/water skim drum

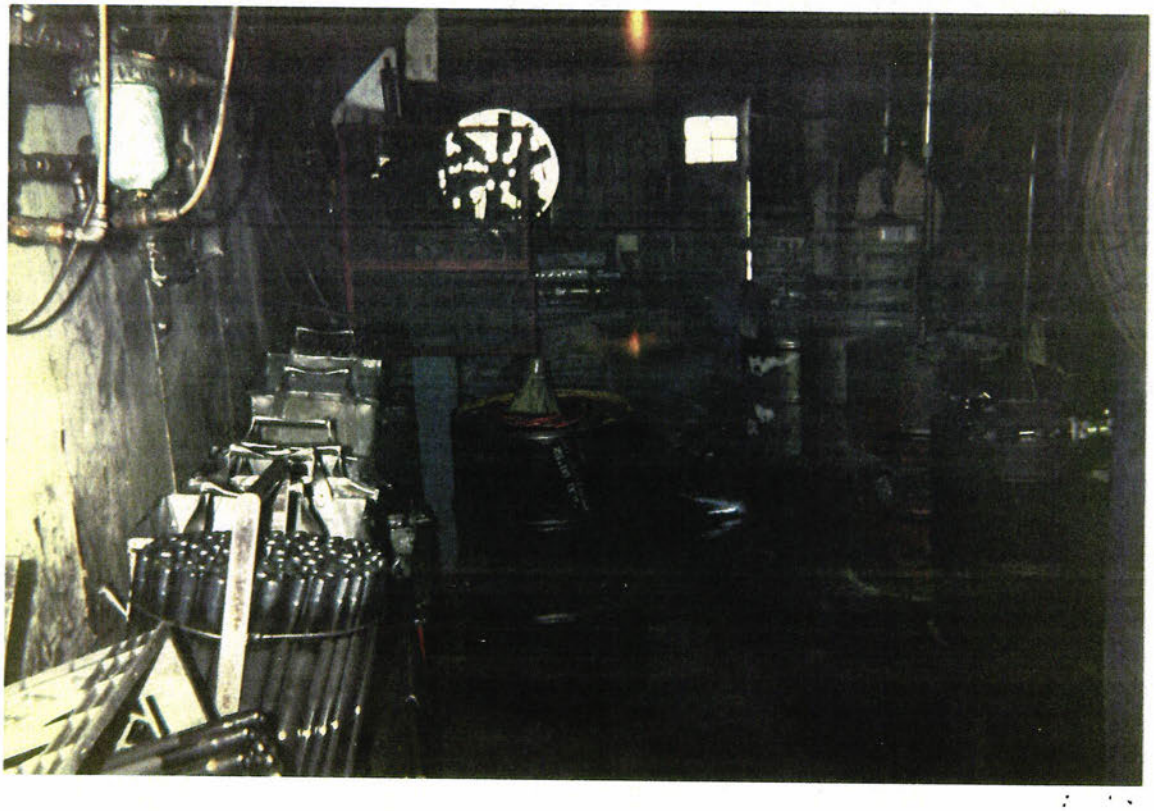


Photo No.: 12 Direction: North Photographer: Todd Dudley
Date/Time: 5-5-92 11:29 Description: #1 Bath from circuit breakers Parts like

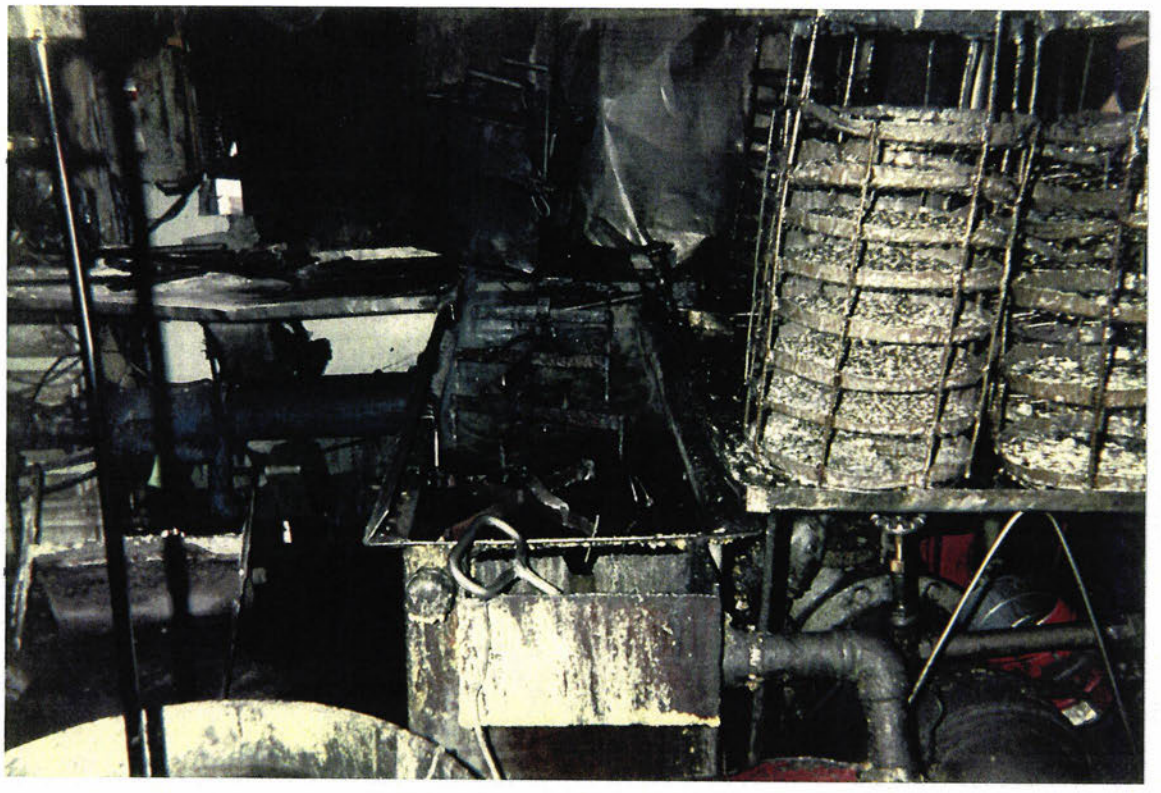


Photo No.: 13 Direction: West Photographer: Todd Dudley
Date/Time: 5-5-92 11:30 Description: #2 Bath Room circuit breaker parts line

Photo No.: 14 Direction: West Photographer: Todd Dudley
Date/Time: 5-5-92 11:35 Description: #3 + #4 Bath Room circuit breakers parts line

Photograph did not expose

Photo No.: 15 Direction: _____ Photographer: Todd Dudley
Date/Time: 5-5-92 11:35 Description: Oil/Water Sepesator

Photograph did not expose

Photo No.: 16 Direction: _____ Photographer: Todd Dudley
Date/Time: 5-5-92 11:35 Description: #2 Fornace

Photograph did not expose

Photo No.: 17 Direction: _____ Photographer: Todd Dudley
Date/Time: 5-5-12 11:35 Description: #2 Furnace

Photo No.: _____ Direction: _____ Photographer: _____
Date/Time: _____ Description: _____

Photo No.: 18 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:37 Description: Cyanide evaporator

Photo No.: 19 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:38 Description: Four drums of hazardous waste

Photograph did not expose

Photo No.: 20 Direction: _____ Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Gravity oil/water sepecator

Photo No.: _____ Direction: _____ Photographer: _____
Date/Time: _____ Description: _____

Photo No.: 21 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Wastes from oil/water seperator

Photo No.: 22 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Wastes from oil/water seperator

Photo No.: 23 Direction: Northwest Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Evaporators

Photo No.: 24 Direction: South Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Wastes Stored Outside

25

Photo No.: 25 Direction: North Photographer: Todd Dudley
Date/Time: 5-5-92 11:45 Description: Wastes Stored in interim status storage area

Photo No.: 26 Direction: East Photographer: Todd Dudley
Date/Time: 11:46 Description: Wastes Stored in interim status storage area

Appendix E

Letter stating that Wayne Manufacturing Company will submit copies of Personnel Training and Contingency Plans, and 1991 Biennial Report to USEPA

MAY 5, 1992

Wayne Manufacturing Co. (WMC) will submit copies of the documents listed below to EPA within 30 days of this RCRA Compliance Evaluation Inspection (5/5/92) to the following address:

Ms. Tran Tran 913-551-7884
RCRA/Iowa Section
U.S. EPA Region VII
726 Minnesota Avenue
Kansas City, KS 66101

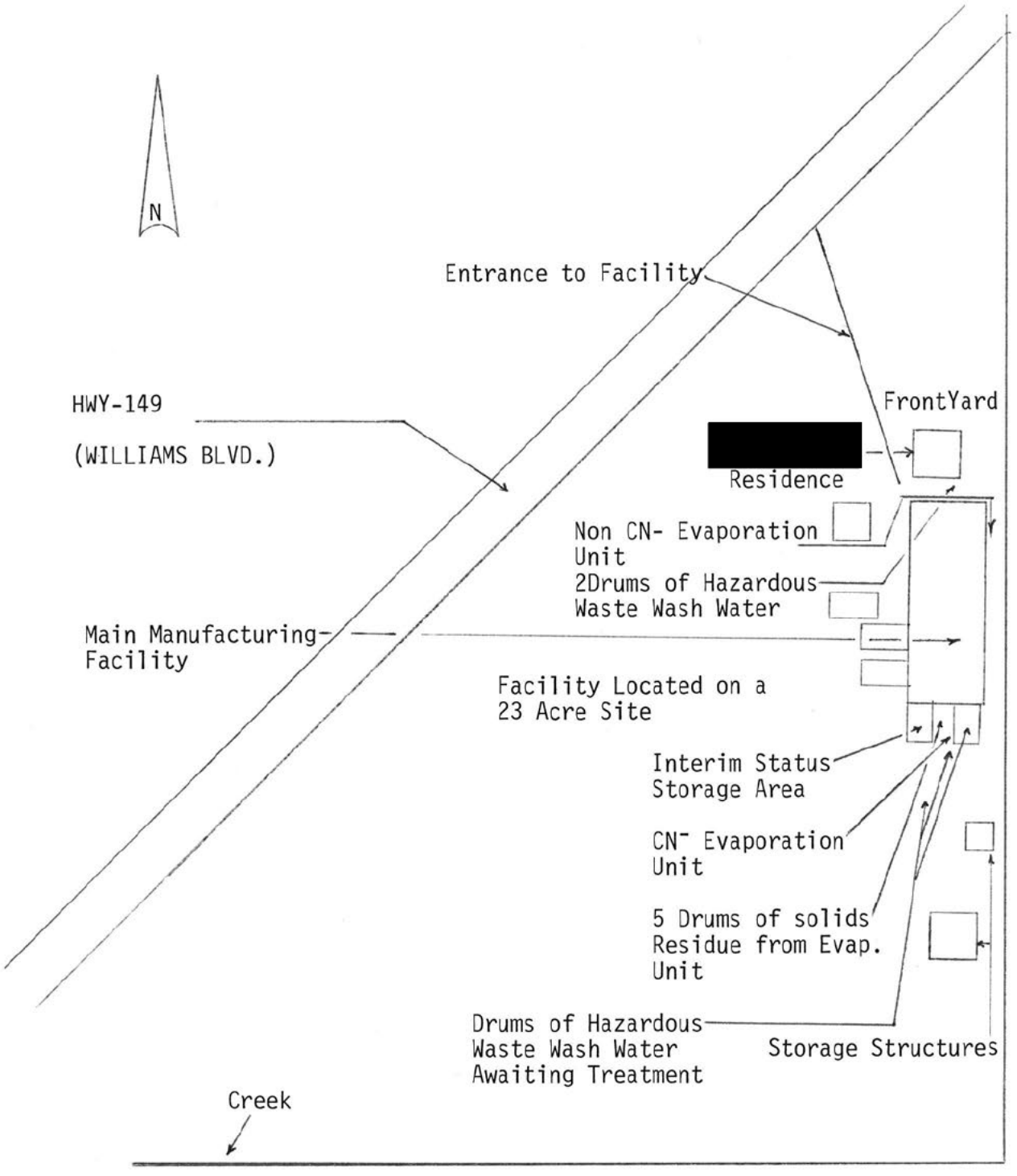
1. Personnel Training Plan - including employee training records
2. Contingency Plan
3. 1991 Biennial Report or certification of Delivery to EPA by 3/1/92. Confirm Biennial Report was submitted to EPA.

MDM 5/5/92
WHB 5/5/92

Appendix F

Facility Layout Map

FIGURE 1
WAYNE MANUFACTURING CO. FACILITY MAP



Linn County, Fairfax Township

Map not to scale

Appendix G

Wayne Manufacturing Company Process Flow Charts

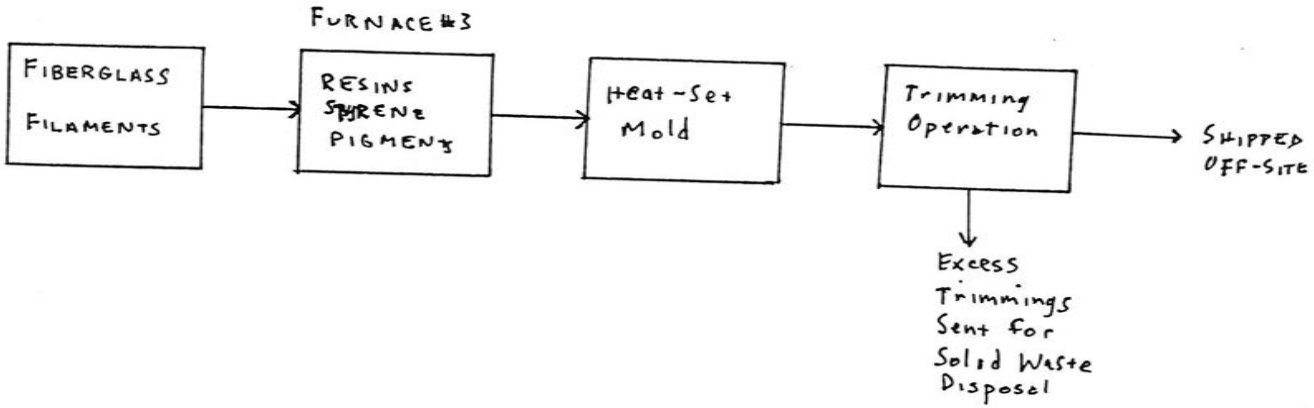


FIGURE 2
FIBERGLASS HAMMER HANDLE PRODUCTION
WAYNE MANUFACTURING
IOWA COMPLIANCE EVALUATION INSPECTION

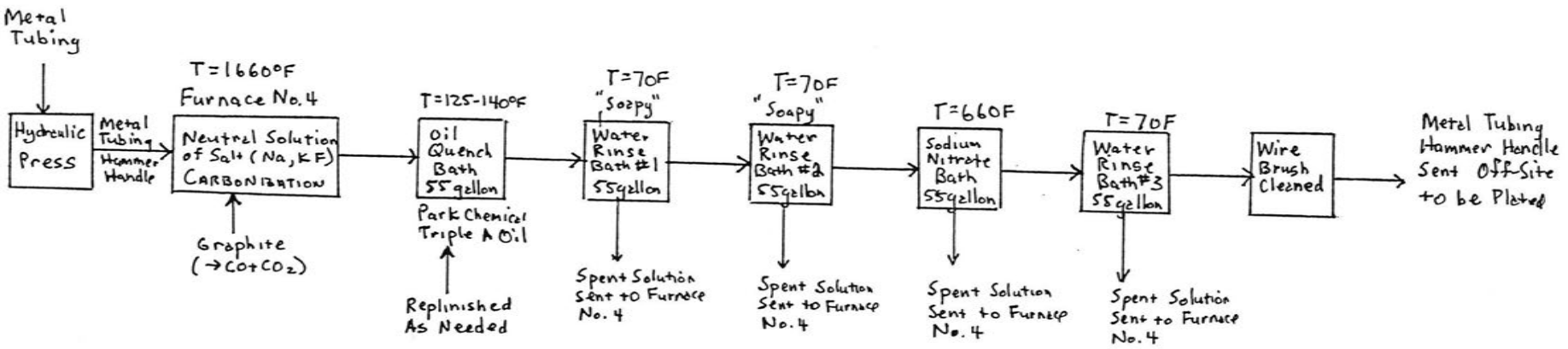


FIGURE 3
METAL TUBING HAMMER HANDLE PRODUCTION
WAYNE MANUFACTURING
IOWA COMPLIANCE EVALUATION INSPECTION

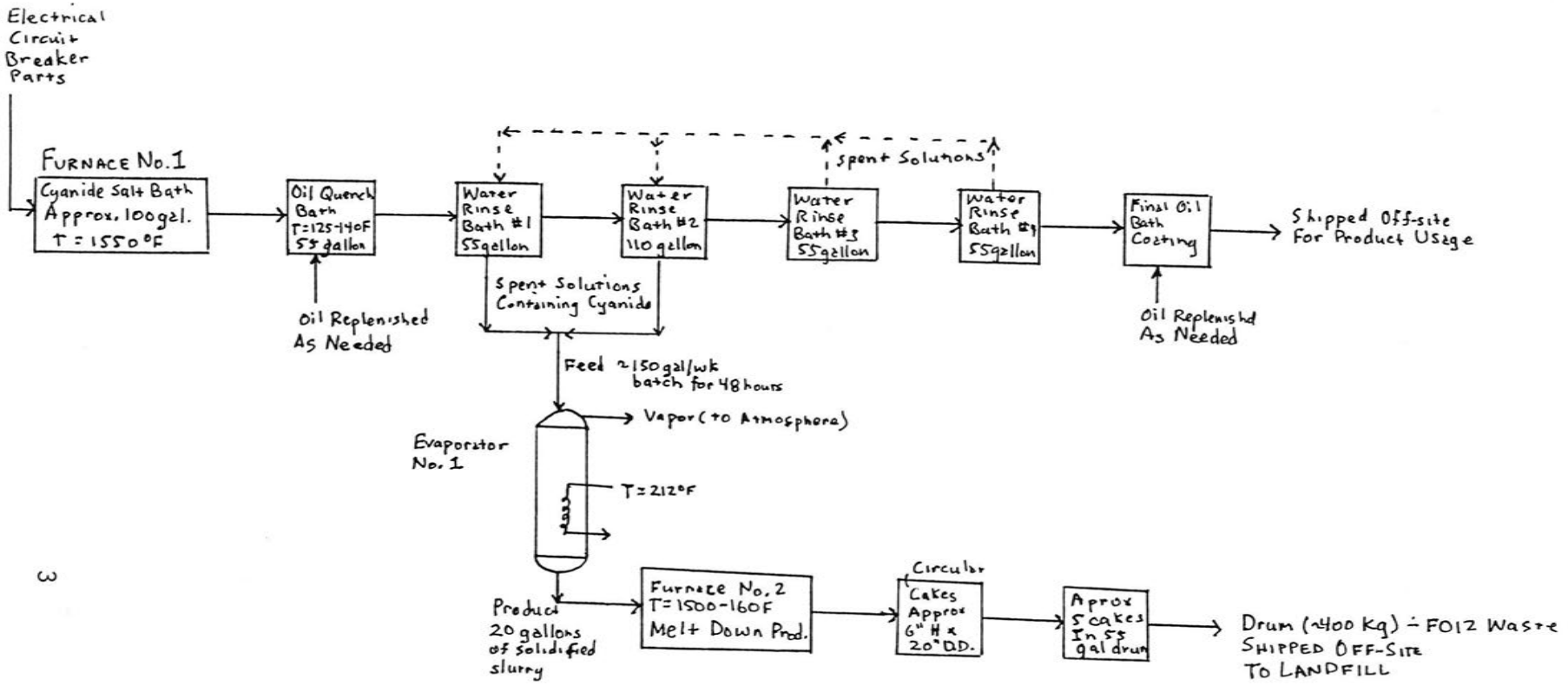


FIGURE 4
ELECTRICAL CIRCUIT BREAKER
PARTS TREATMENT
WAYNE MANUFACTURING
IOWA COMPLIANCE EVALUATION INSPECTIONS

Appendix H

Inspection Checklist

DRAFT

FEDERAL INSPECTION RECORD AND CHECKLIST

INITIAL INFORMATION

A. Name: WAYNE MANUFACTURING CO (WMC) Date: MAY 5, 1992
Address: 5051 Williams BLVD. Time: 0900
Cedar Rapids, IA 52404
Phone #: (319) 396-7010

B. Activity #: FAC. ID → IAD005277256
Inspector: MIKE MACLEOD / TODD DUDLEY (BUWST)

C. Initial Drive-by: Obvious concerns, observations or questions: ( ) Yes (✓) No
Describe: _____

D. Facility Representatives/Title: [redacted] President/Owner
[redacted] - Foreman

E. Introduction: (✓) Credentials/I.D. (✓) Purpose

(✓) Authority (Sec 3007 RCRA) (✓) Scope

(✓) CBI Explanation

(✓) Collection of correct and accurate information (Sec 1001/1002 USC)

F. Access Granted: (✓) Yes ( ) No (Obtain name, date, time and reason)

G. Type of Facility:

( ) Federal ( ) State ( ) County ( ) City (✓) Private

H. Description of facility operations: SEE NOTES
* Facility had a strong odor (adhesive, plastic?) - Mr. Barker stated that the odor was fiberglass -

I. Comments: [redacted] was out of town at time of inspection
[redacted] (Foreman) was facility rep.

Tran Tran 913-551-7884

RECORDS INSPECTION

DNC - Did not check (out of initial Scope)

Citations: 40 CFR XXX.XX(X)(X)

WASTE OIL ?

( ) Waste oil generator ?
( ) Waste oil properly stored, transported and disposed of-
( ) Energy/material recovery on-site/off-site

ON-SITE WASTE GENERATION-GENERAL/QUARTERLY REPORTS/MANIFESTS

(✓) Generator determines the hazardous characteristics of their waste-262.11
[✓] Registered as a HW generator & has I.D. number-262.12
[✓] Utilizes authorized HW TSD, or RR facility
[ ] Bineal Reports sent in-262.41 - Not available @ Facility
[✓] Generator uses manifest system-262.20
(✓) Are records maintained for a 3 year period-262.40(a)
(✓) "Land-Ban" notifications, etc. maintained for 5 years (effective date Aug 8,1988)-268.7(a)(6)
(✓) Manifest filled out in accordance with instructions-262.20 - made copy - DNC
(✓) Manifest document, I.D., shipment numbers-262.20 "
( ) Generator's name, address, phone #-262.20 "
( ) All transporter's names, phone #, MO and EPA I.D.#'s-262.20 "
( ) Designated facility name, address, phone, MO and EPA I.D.# DOT shipping name, Hazard Class and I.D.# (RQ-if required)-262.20/49 CFR 172 "
( ) Proper "Land-Ban" notification, (EPA HW #, treatment standards, manifest #, waste analysis data)-262.11(d) "
( ) Containers, Quantity and Unit wt/vol being shipped properly designated-262.20 "
( ) Proper certification including waste minimization-262.20 "
( ) Manifest properly signed and dated-262.20 "
( ) Manifest returned within 35 days-5.262(2)(B)6,B "
( ) If not, exception generator report submitted within 45 days-262.42(b) "
[ ] Spills of reportable quantities reported? NA
( )SG Waste reclaimed under a contractual agreement (type, frequency, and shipping vehicle ownership)-262.20(e)(1) NA
( )SG Generator maintains a copy of the contractual agreement onsite-262.20(e)(1) NA

OFF-SITE GENERATED WASTES-MANIFESTS

( ) Manifests signed and dated-265.71(a)(1)
( ) Manifest discrepancies noted & corrected w/in 15 days 265.71(a)(2) & 265.72
( ) Copy immediately given to transporter-265.71(a)(3)
( ) Copy sent to generator w/in 30 days-265.71(a)(4)
[ ] Facility Manifest Reports sent in QTRLY-7.262(2)(E)1
( ) Manifest records maintained for 3 years-265.71(a)(5)
( ) "Land-Ban" notifications, etc. maintained for 5 years (effective date Aug 8,1988)-268.7(a)(6)

PREPAREDNESS AND PREVENTION-265 Subpart C

( ) Arrangements with local emergency agencies-265.37
( ) Emergency coordinator(s) on premise or on call

CONTINGENCY PLAN-265 Subpart D

( ) Contingency Plan-265.51
( ) Detailed description of procedures that personnel must implement to respond to fires, explosions, or release of hazardous waste-265.52(a)
( ) Descriptions of arrangements with local emergency response teams, (fire, police, hospitals, etc.), if needed-265.52(c)

Info. not available @ Facility
Facility will send copy to EPA within 30 days.

CONTINGENCY PLAN Continued

( ) Name and address, and phone numbers (home & office) of emergency coordinators-265.52(in office)
( ) Emergency equipment,description,location & capabilities-265.52
( ) Tank spills covered in Contingency Plan-?
( ) Evacuation plan, if applicable-265.52(f)
[ ] RA notified and appropriate action taken if an emergency or offsite release occurred requiring implementation of the contingency plan-265.56(i)/(j)

PERSONNEL TRAINING-265.16

— ( ) Documentation of HW waste director's qualifications or training-265.16(a)(2)
— ( ) Completed classroom or on-the-job training within 6 months or annually-265.16
— ( ) Job title, description, and name of the person filling position-265.16(d)
— ( ) Written record of the type and amount of training given 265.16(d)
— ( ) Documentation confirming that training has been given 265.16(d)

Info not available @ Facility
Facility will send to EPA within 30 days

WASTE ANALYSIS

( ) Obtain or complete a physical and chemical analysis of a representative sample of waste, prior to T,S, or D-265.13(a)(1)
( ) Written waste analysis plan: parameters and rationale/test methods/sampling methods/frequency/analysis from generator/additional analysis for specific management methods-265.13(b)1/2/3/4/5/6
( ) Waste analysis covers "Land-Ban" wastes-265.13(b)(6)

DNC

INSPECTIONS

( ) Written inspection schedules and logs for monitoring safety, emergency equipment, security, operating and structural equipment, including: inspectors name, frequency, observations, and the nature,date and time of repairs-265.15(b)(1) & (d)
(✓) Inspection records maintained for 3yrs-265.73(b)(5)

NOT

GENERAL TSD REQUIREMENTS-OPERATING RECORD

( ) Internal tracking system: procedures for inspection, manifest verification and identification of incoming wastes and its movement w/in the facility-265.13(c)
( ) Description, quantity, EPA HW#, and TSD process, by handling codes with method (pg 659) and date, for all HW,s-265.73(B)(1)
( ) Location and quantity of each HW, cross-referenced with manifest #, (disposal facilities need map or diagram) 265.73(b)(2)
( ) Waste analysis records from off-site sources-265.73(b)(3)
( ) Monitoring, testing, analytical results if necessary 265.73(b)(6)
( ) Treat, store, dispose, change process/wastes or exceed capacities in current Part A-270.71
( ) Increase physical facility by >50% needs revised Part A-270.72
( ) All closure costs, and for disposal facilities atl post closure cost estimates-265.73(b)(7)

"LAND-BAN" :

( ) Records of quantities, date of placement in land-disposal unit and generator notice, for wastes with date extension or petitions-265.73(b)(8)
( ) Off-site treatment, land-disposal generator notice-265.73(b)(9)
( ) Off-site disposal, treater/generator notice and certification-265.73(b)(11)
( ) On-site treatment, generator notice information w/o manifest #-265.73(b)(10)
( ) On-site disposal, treater/generator notice and certification information w/o manifest #-265.73(b)(12) NA
( ) Unmanifested waste reports for off-site facilities-265.76
( ) Reports of emergencies/releases to RA (if applicable) 265.73(b)(4) and 265.77(a)
( ) Reports of GWM data to RA-265.77(b)
( ) Reports of closure to RA-265.77(c)

GROUNDWATER MONITORING-265 Subpart F

( ) Sampling and analysis plan on-site-265.92(a)
( ) Samples and groundwater levels taken-265.92(a) and (b) NA
( ) Groundwater monitoring results kept-265.94(a)

CLOSURE AND POST-CLOSURE-265 Subpart G

( ) Closure plan for facility-265.112(a)
( ) Description of how and when facility will be closed-265.112(b)
( ) Estimate of maximum inventory of hazardous waste-265.112(b)
( ) Description of how to remove/decontaminate equipment & site-265.112(b) DNC
( ) Description of all other closure activities-265.112(b)
( ) Schedule for closure of each HW unit & facility-265.112(b)
( ) Estimated year of closure(if using trust fund)-265.112(b)
( ) Post-Closure plan for disposal facilities only-265.118(a)
( ) Notification of any closure activities to RA within 180 days-265.112(d)
( ) Additional closure/post-closure info;7.265(G),(K),&(L) and 265.113-.119

FINANCIAL REQUIREMENTS-265 Subpart H (state and federal exempt)

( ) Cost estimate for closure/post-closure-265.142/265.144
( ) Financial assurance for closure/post-closure-265.143/265.145 ~~NA~~ DNC
( ) Liability for sudden accidents-265.147(a)
( ) Liability for non-sudden accidents for disposal facilities only-265.147(b)

TANK REGULATIONS-SUBPART J

( ) Non-liquid by PFT, inside an impermeable floor (are exempt from 265.193,Containment & Detection)-265.190(a)

Assessing EXISTING tank integrity, for tanks w/o secondary cont.- 265.191 NA

( ) HW subsequent to 7/12/86, 12 months to assess after becoming HW-265.191(c)
( ) Written assessment by independent PE by 1/12/88-265.191(b)
( ) (a) Design stds.,characteristics of HW, existing corrosion protection, age-265.191(b) NA
( ) (b) Leak test for non-enterable tanks-265.191(b)
( ) (c) PE inspection or leak test for enterable tanks AND ancillary equipment-265.191(b)
( ) Responded IAW 265.196(response) if tank leaking-265.191(d)

Design and installation of NEW tank systems - 265.192

( ) Written assessment by independent PE-265.192(a)
( ) (a) Adequate design standards
( ) (b) Characteristics of HW
( ) (c) Corrosion exam by corrosion expert
( ) (d) Underground tank and components not effected by vehicular traffic
( ) Installation inspection by independent PE-265.192(b)
( ) Appropriate corrosion protection-265.192(f)
( ) Written certification statements on file-265.192(g)

NA

Containment (if none)

( ) Have a variance from Regional Administrator-265.193(g)

General operating requirements (265.194) and inspections

( ) Daily inspections - overfill/spill control, above ground portions of tank, data from monitoring equipment and general area-265.195(a)
( ) Inspections of cathodic protection systems within 6 months of installation and then annually-265.195(b)(1)
( ) Bi-monthly inspection of impressed current sources-265.195(b)(2)
( ) Are these inspections documented in operating record? 265.195(c)
( ) Response to leaks or spills in accordance with 265.196(response)
( ) Tank closed in accordance with 265.197(closure/post-closure)
( ) Waste analysis done to assure compatibility, if applicable 265.200

NA

WALK-THROUGH INSPECTION

TSD CONTAINERIZATION AND STORAGE

(✓) Prevent unknowing entry-265.14(a)
(✓) Controlled entry, 24-hr. surveillance, or barrier,-265.14(b)
( ) "Danger Unauthorized Personnel Keep Out" signs - Did not notice / Did not ask posted-265.14(c)
( ) "No Smoking" signs conspicioisly placed-265.17(a) - "
[✓] Containers in good condition-265.171
[✓] Containers kept closed in storage-265.173(a)
(✓) Container/tank is clearly marked and identified, including the date of accumulation-268.50(a)(2)
(✓) "Land-Ban" wastes storied for less than 1 year-268.50(c)
[✓] Containers storing incompatible waste separated or protected from each other-265.177
(✓) Adequate aisle space is available-265.35 - room was full, but access was possible
[✓] Containers of ignitable or reactive waste stored >50 feet from property line-265.176
(✓) Daily inspection of loading/unloading area (when in use) 265.15(a)(4)
(✓) Facility inspected and maintained (weekly)-265.174 - copy of inspections obtained

No written schedule ~~of~~ for inspecting all monitoring equip., safety equip. Security devices, etc.

90/180/270 DAY CONTAINERIZATION, AND STORAGE AREAS

(for waste stored in a generator storage area)

( ) Date of accumulation marked-262.34(a)(2) NOT
(✓) Containers marked "Hazardous Waste"-262.34(a)(3)
[✓] Containers in good condition-5.262(2)(C)A; 265.171
[✓] Containers are compatible with wastes-265.172
[✓] Containers kept closed in storage-265.173(a)
[✓]SG Storage does not exceed 180 days (270 days if transported >200 miles) 262.34
[✓]LG Storage less than 90 days-262.34
[ ] Containers storing incompatible waste separated or protected from each other-265.177 NA
(✓) Adequate aisle space is available-265.35
[ ]LG Containers of ignitable or reactive waste stored >50 feet from property line-265.176 ~~NO~~ NO - 2 dms of Haz. Waste Water (~~CN~~ CN^- & D002(?)) near non-CN^- evaporator w/in 50' of property line
(✓) Facility inspected and maintained (weekly)-265.174

Satellite Accumulation

[ ] Stored in satellite areas less than 1 year-262.34(c) ← Satellite NA
( ) Container marked identifying contents/excess accumulation date-262.34(c) NOT - Oil/Water skimming from oil/water separator
[✓] Containers kept closed/compatible/good condition-262.34(c)
[✓] Quantities accumulated not exceeding 55 gal. (1 quart of acutely-hazardous wastes)-262.34(c)

PRE-TRANSPORT PACKAGING REQUIREMENTS

( ) Waste packaged/labeled/marked per DOT -262.30/.31/.32
( ) Placards available for use by transporters-262.33 NR

PREPAREDNESS AND PREVENTION-265 Subpart C

(✓) Device in the hazardous waste operation area capable of summoning emergency assistance-265.34 Facility uses "buddy" systems. Telephones placed throughout
( ) Adequate and proper spill control, decontamination and safety equipment available (fire blankets, gas masks, SCBA, absorbents, etc) and properly tested and maintained-265.32
( ) Adequate water supply for fire control equipment-265.32(d)
( ) Communication and emergency equipment tested and maintained-265.33
( ) Facility operated and maintained to minimize the possibility of an emergency- 265.31 NOT REALLY, Drums were spread out all over outside of facility.
(✓)SG Employees familiar with waste handling and emergency procedures-262.34(d)

PREPAREDNESS AND PREVENTION Continued

( )SG Emergency coordinator's name and phone number posted near phone-262.34(d)
( )SG Telephone number of fire department posted near phone-265.34(d)
( )SG Location of fire extinguisher and spill control equipment posted near phone-262.34(d)

NA/ DNC

INTERIM STATUS SURFACE IMPOUNDMENTS-Subpart K

( ) New units or expansions have double liner and leachate collection system-265.221(a)
( ) At least 2 ft. of freeboard is maintained-265.222(a)
( ) If <2 ft. of freeboard, certification by PE-265.222(b)
( ) Surface impoundment is inspected weekly-265.226(a)(2)
( ) All earthen dikes have protective cover-265.223
( ) Waste analysis conducted or written documentation obtained before placing a substantially different HW into impoundment-265.225
( ) Freeboard inspected each operating day-265.226(a)(1)
( ) Waste treated/rendered so it is no longer in an ignitable or reactive state-265.229(a)
( ) Incompatible wastes separated265.230
( ) Appropriate closure/removal/decontamination of all residues-265.228
( ) Appropriate post-closure maintenance of impoundment-265.228

NA

GROUNDWATER MONITORING-Surface Impoundments, Landfills, Landfarm

Is the facility in the detection or assessment mode?
( ) Detection ( ) Assessment

( ) Groundwater monitoring wells installed, at least 1 hydraulically up-gradient and at least 3 hydraulically down-gradient-265.91(a)(1)
( ) Well integrity maintained (265.91 and guidance document):
( ) No annular space between bore wall and casing
( ) No water around collar
( ) Locked or secured well cap in place
- Has well usage changed? New or unapproved wells
- Any disturbance of local area which could modify groundwater flow dynamics?

NA

TANK REGULATIONS-Subpart J

Containment

( ) Secondary containment for all new tanks and components-265.193(a)
( ) (a) for known age tanks by 1/12/89 or when the tanks are 15 years old, whichever comes later
( ) (b) for unknown age tanks by 1/12/95, or if the facility is more than 7 years old, than secondary containment is needed by the time the facility is 15 years of age or by 1/12/89, whichever comes later
( ) Capable of detecting and collecting a release within 24 hours-265.193(c)
( ) Precipitation, leaked or spilled liquid removed within 24 hours-265.193(c)4
( ) Containment of 100% of largest tank-265.193(e)
( ) Liner external to tank, vault, double-walled, other approved-265.193(e)
( ) Secondary containment of all ancillary equipment-265.193(f) and inspected/leak detection every 24hrs if not empty except:
(f) above ground piping, welded flanges, joints, connections, sealless or magnetic pumps and pressurized piping with automatic shutoff devices, if inspected each operating day

NA

General Operating Requirements (265.194) and Inspections (265.195)

( ) Compatible waste in tanks-265.194(a)
( ) Appropriate spill and overflow controls; i.e. valves, sensors, feed cut-offs, high-level alarms, freeboard, etc.-265.194(b)
( ) Ignitable and reactive waste properly nullified in tank 265.198(a)(1) N/A
( ) Ignitable and reactive waste stored and treated properly, (i.e. so they can't react or ignite) and in accordance with NFPA zone requirements-265.198(a)(2)

SQ STORAGE TANKS-40 CFR 265.201

[ ] Uncovered tanks have 2 ft. freeboard unless containment system is in place that holds an equal volume as the freeboard-265.201(b)(3)
( ) Continuously fed tanks equipped with a feed cut-off system or a by pass system-265.201(b)(4)
( ) Waste and/or treatment method is compatible with tank-265.201(b)(2)
[ ] Ignitable or reactive wastes rendered safe/handled properly-265.201(e)(1)/(f) N/A
[ ] Ignitable or reactive wastes in covered tanks treated/stored in accordance with NFPA's buffer zone requirements-265.201(e)(2)
[ ] Volatiles with vapor pressure >78mm Hg @ 25°C not placed in open tanks-5.262(2)(C)2,D,I
( ) Inspection of discharge control equipment/monitoring data/ freeboard/leaks/corrosion/etc. each operating day-265.201(c)1/2/3/4
( ) Weekly inspection of confinement structure, construction materials, and general area-265.201(c)5
( ) Wastes and residues removed, including equipment, and handled properly upon closure-265.201(d)

Inspector's Signature Michael D. MacGregor

Title GEOLOGICAL ENGINEER (BVWST)

Appendix I

Operating Record and Weekly Inspection Log

Wastes Shipped Off-Site

Barrel #	Date Start	Date Filled	Batch Numbers		Inspection Date
#13	6-21-90 8-8-90 8-15-90 8-24-90	#19 Batch 10-16-90	#14 #15 #16 2 Cakes #17	2-22-91 WHB 3-1-91 WHB 3-8-91 WHB 3-15-91 WHB 3-21-91 WHB 3-27-91 WHB	1-2-91 WHB 1-8-91 WHB 1-16-91 WHB 1-23-91 WHB 1-29-91 WHB 2-2-91 WHB 2-8-91 WHB 2-15-91 WHB
#14	8-24	10-16-90 #19 Batch	2 Cakes #17 2 Cakes #18		
#15	9-27-90	11-9-90 #21 Batch	1 + partial #18 3 Cakes #20		
#16	11-12-90	12-21-90 #23 Batch	#21 Batch #22 Cakes		
#17	12-10-90	3-27-91 #25 Batch	#22 Cakes (2) #23 Cakes (3)		
#18	3-1-91	3-27-91 #25 Batch	#24 Cakes (4)	Shipped 3-29-91 WHB	
#19	3-1-91		#24 2 small Cakes (1) used up for Recycle 6-4-91	4-4-91 WHB 4-11-91 WHB 4-19-91 WHB 4-26-91 WHB 5-2-91 WHB 5-9-91 WHB 5-16-91 WHB 5-23-91 WHB 5-30-91 WHB 6-6-91 WHB 6-13-91 WHB 6-19-91 WHB 6-26-91 WHB 7-3-91 WHB 7-10-91 WHB	
#1	7-8-91	Filled #3 7-18-91 Batch	#1 Filled #3 Batch 4 Cakes 1 Cake #2	7-17-91 WHB 7-25-91 WHB 7-31-91 WHB	
#2	7-12-91	Filled #4 Batch 7-25-91	#3-1 Cake #2 3 Cakes	8-8-91 WHB 8-15-91 WHB 8-22-91 WHB	
#3	7-19-91	#6 Batch filled 8-15-91	#3-1 Cake 2 small #5 1 Cake #4-3 Cakes	8-25-91 WHB 9-5-91 WHB 9-12-91 WHB 9-19-91 WHB 9-26-91 WHB 10-3-91 WHB 10-8-91 WHB	
#4	8-9-91	#7 Batch 8-22-91	#5-4 Cakes #6-1 Cake		
#5	8-23-91	#9 Batch 10-2-91	#7-2 Cakes #6-1 Cake #8-3 Cakes	Shipped 10-9-91 WHB	
#6 1	9-30-91	#12 Batch 11-21-91	#8-2 Cakes #9-2 Cakes	10-16-91 WHB 10-29-91 WHB 10-23-91 WHB 11-6-91 WHB	
#2	10-7-91	#12 Batch 11-21-91	#11-3 Cakes #10-2 Cakes	11-12-91 WHB 11-22-91 WHB 11-18-91 WHB 11-28-91 WHB	
#3	11-1-91	#14 Batch 2-8-92	#13-3 Cakes #11-1 Cake	12-4-91 WHB 12-11-91 WHB 12-17-91 WHB 12-24-91 WHB 12-31-91 WHB	
#4	12-6-91	Batch #15 3-11-92	2nd & other Cakes #13-1 Cake	1-7-92 WHB 1-14-92 WHB 1-21-92 WHB 1-24-92 WHB 1-31-92 WHB 2-6-92 WHB 2-14-92 WHB 2-19-92 WHB 2-25-92 WHB	
#5	2-25-92	Batch #15 3-11-92	2nd & other #14 pcs	3-4-92 WHB 3-11-92 WHB 3-17-92 WHB 3-23-92 WHB 3-30-92 WHB 4-6-92 WHB	
#6	2-25-92	Batch #16 4-21-92	#14 #15 2nd	4-13-92 WHB 4-20-92 WHB 4-27-92 WHB 5-4-92 WHB	
#7	3-11-92		#15		

Pork Cove #5 - Re melt Salt
1988.

Barrel #	Date Start	Date Filled	Batch Numbers		Inspection Date
#1	9/28	9/28	#1		10-1-88 WB
#2	10/26	10/26	#1 #2		10-8-88 WB
#3	10/26	10/27	~~#2~~ #3		10-15-88 WB 10-22-88 WB 10-28-88 WB
#4	10/27	11/15	~~#3~~ #4		11-4-88 WB 11-11-88 WB
#5	10/28	11/15	TOP #1, #4 ~~#5~~	F/W Shipped 11/16/88	11-16-88 WB
#6	11/15 (88)		~~#4~~ #6 ~~#5~~	3-25-89 WB 4-1-89 WB 4-8-89 WB 4-15-89 WB 4-22-89 WB 4-29-89 WB 5-6-89 WB 5-13-89 WB 5-19-89 WB 5-26-89 WB; 1-27-89 WB 2-3-89 WB 2-10-89 WB 2-17-89 WB 2-25-89 WB 3-4-89 WB 3-11-89 WB 3-18-89 WB; 12-9-88 WB 12-17-88 WB 12-24-88 WB 12-31-88 WB 1-6-89 WB 1-13-89 WB 1-21-89 WB	11-18-88 WB
#7	11/16		#5		11-25-88 WB
~~#8~~					12-3-88 WB
(6) 1	~~11/15~~	89 ~~5/26~~	#5 - #1	9-22-89 WB 9-30-89 WB 10-6-89 WB 10-13-89 WB 10-21-89 WB 10-27-89 WB; 8-4-89 WB 8-12-89 WB 8-18-89 WB 8-25-89 WB 9-2-89 WB 9-8-89 WB 9-15-89 WB; 7-7-89 WB 7-14-89 WB 7-21-89 WB 7-28-89 WB	6-2-89 WB
(7) 2	11/16	5/26	#5 - #1		6-9-89 WB 6-16-89 WB
(8) 3	11/16	~~5/26~~	#5 - #1		6-24-89 WB 6-30-89 WB
#4	6-1-89	~~6-7-89~~	#2 - #3		
#5	~~6-1-89~~	6-7-89	#2 - 3#		
- #6	~~6-7-89~~		#3		
(1989 Oct. 20)	Eletrolisea				
#1	10-19-89	11-29-89	#1 (it) + #2	3-16-90 WB 3-23-90 WB 3-30-90 WB 4-5-90 WB 4-12-90 WB 4-19-90 WB 4-27-90 WB 5-4-90 WB 6-12-90 WB 6-18-90 WB 6-25-90 WB 7-20-90 WB 8-2-90 WB 8-29-90 WB 9-5-90 WB 9-26-90 WB 10-17-90 WB 11-7-90 WB 11-26-90 WB 12-14-90 WB; 12-29-89 WB 1-6-90 WB 1-12-90 WB 1-19-90 WB 1-27-90 WB 2-2-90 WB 2-8-90 WB 2-16-90 WB 2-23-90 WB 3-2-90 WB 3-10-90 WB; 7-2-90 WB 7-27-90 WB 8-15-90 WB 9-12-90 WB 10-4-90 WB 10-25-90 WB 11-13-90 WB 12-1-90 WB 12-21-90 WB	10-21-89 WB
#2	10-27-89 10-30-89	11-29-89 Return	#2 + #3		10-27-89 WB 11-3-89 WB 11-10-89 WB
#3	10-31-89	11-29-89	#3 - #4		11-17-89 WB 11-24-89 WB
#4	11-2-89	partial 11-29 4-10-90	#4 - #5		12-2-89 WB 12-8-89 WB
[illegible]	11-29-89	filled final 1-2-3 metal [illegible]	#5 #9 filled new material		12-15-89 WB 12-23-89 WB
#5	1-31-90	4-10-90	#6 Cakes #9 filled		7-9-90 WB 7-14-90 WB
#6	1-31-90	4-10-90	#6 (1) cake #7 #10 #7 Cakes (3)		8-8-90 WB 8-22-90 WB
#7	2-9-90	4-10-90	#7 Cakes (2) 8-9-90 #10 cakes #8 Cakes (1) mixed fillers		9-19-90 WB 10-11-90 WB
#8	2-28-90	Ready to burn 4-10-90 filled #14 6-21-90	#8 Cakes (1) #14 #8-9-10 Cakes		11-7-90 WB 11-26-90 WB
#9	4-11-90 5-4-90	Ready to fill 5-4-90 8-8-90 #15	#8-9-10 mixed (1) Cake #7 (2) Cakes #11		12-7-90 WB 12-26-90 WB
#10	5-4-90	8-8-90 #15	(3) Cakes #11 (2) Cakes #12		
#11	5-14-90	8-8-90 #15	(2) Cakes #12		
#12	5-14-90	#16 8-15-90	2 Cakes #13 #14 1 Cake #12 P8		

over

PARK CASE #5 Re melt Salt. 1.8 - 7.9 P.P.M TOTAL CN

500 # Batch

Barrel #	Date Start	Date Filled	Batch Numbers		Inspection Date
1	4/22/88	5/4/88	#1-2-8		4/30/88-WB,
2	4/26/88	5/5/88	#2-3-9		5/6/88-WB 5/13/88-WB
3	4/28/88	5/6/88	#4-5-10		5/20/88-WB
4	5/2/88	5/10/88	#5-6-7-11		5/24/88-CWW
5	5/3/88	5/11/88	#6-9-11-12		6/2/88-CWW 6/16/88-MDR
6	5/5/88	5/11/88	#7-8-9-12		6/17/88 WB.
7	5/9/88	5/13/88	#10-13-14		6/24/88/WB
8	5/13/88	5/17/88	#13-14-15		7/1/88/WB.
9	5/17/88	5/18/88	#14-15-16		7/8/88/CWW
10	6/17/88	6/10/88	#16-17-(19XX)		7/13/88-WB 7/22/88-WB
11	7/14/88	7/26/88	#18-20		7/29/88-CWW 8/5/88 WB.
12	7/26/88	8/2/88	20-21		
13	8/2/88	8/11/88	#21-22- Bal Recycle.	Shipped F.I.W.	8/11/88

Appendix J

Hazardous Waste Manifests For Shipments Made Between 1988 and 1991

State Form LPC 62 8/81 IL532-0610

NOTE: FORM DESIGNED TO PRINT 8 LINES PER INCH. EPA Form 8700-22 (Rev. 6-89) Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IAD005277256 Manifest Document No. 03017

2. Page 1 of 1

Information in the shaded areas is not required by Federal law, but is required by Illinois law.

3. Generator's Name and Mailing Address Location If Different:

WAYNE MFG. CO.
5051 WILLIAMS BLVD., CEDAR RAPIDS, IA 52404

4. Generator's Phone (319) 396-7010

A. Illinois Manifest Document Number IL 4464742 MANIFEST FEE PAID

B. Illinois Generator's ID 1191113 0029

5. Transporter 1 Company Name FIW, INC. 6. US EPA ID Number ILD039616677

C. Illinois Transporter's ID 00115

D. (815) 239-2377 Transporter's Phone

7. Transporter 2 Company Name 8. US EPA ID Number

E. Illinois Transporter's ID

F. ( ) Transporter's Phone

9. Designated Facility Name and Site Address 10. US EPA ID Number ILD980502744

FIW, INC.
6125 N. PECATONICA RD.
PECATONICA, IL 61063

G. Illinois Facility's ID 2011800002

H. Facility's Phone (815) 239-2377

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. HAZARDOUS WASTE SOLID, N.O.S. (QUENCHING SALTS) ORM-E NA 9189 RQ EPA F012	01	DM	00700	1	EPA HW Number XX F011 Authorization Number 0160240
b.					EPA HW Number XX Authorization Number
c.					EPA HW Number XX Authorization Number
d.					EPA HW Number XX Authorization Number

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above In Item # 14
1 = Gallons 2 = Cubic Yards

15. Special Handling Instructions and Additional Information

EMERGENCY CONTACT***1-815-239-2377

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Date Month Day Year

[redacted]

Date Month Day Year 03 19 91

Printed/Typed Name Signature Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Date

Printed/Typed Name Signature Month Day Year

This Agency is authorized to require, pursuant to Illinois Revised Statutes, Chapter 111½ Section 21, that this information be submitted to the Agency. Failure to provide the information may result in a civil penalty against the owner or operator of not to exceed $25,000 per day of violation. Falsification of this information may result in a fine up to $50,000 per day of violation and imprisonment up to 5 years. This form has been approved by the Forms Management Center.

COPY 6. GENERATOR COPY

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY DIVISION OF LAND POLLUTION CONTROL

P.O. BOX 19276 SPRINGFIELD, ILLINOIS 62794-9276 (217) 782-6761

State Form LPC 62 8/81 IL532-0610

PLEASE TYPE (Form designed for use on elite (12-pitch) typewriter.) EPA Form 8700-22 (Rev. 9-88) Form Approved. OMB No. 2050-0039, Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IAD005277256 Manifest Document No. 03398

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law, but is required by Illinois law.

3. Generator's Name and Mailing Address / Location If Different:
WAYNE MFG., CO.
5051 WILLIAMS BLV., SW, CEDAR RAPIDS, IA 52404

4. Generator's Phone (319) 396-7010

A. Illinois Manifest Document Number IL 3601406 FEE PAID IF APPLICABLE

B. Illinois Generator's ID 9 1 9 1 1 3 0 0 2 9

5. Transporter 1 Company Name: LAIDLAW ENV SVCS OF ILLINOIS, INC. — 6. US EPA ID Number: ILD980502744

C. Illinois Transporter's ID 0 0 1 5

D. (815) 239-2377 Transporter's Phone

7. Transporter 2 Company Name — 8. US EPA ID Number

E. Illinois Transporter's ID

F. ( ) Transporter's Phone

9. Designated Facility Name and Site Address:
LAIDLAW ENV SVCS OF ILLINOIS, INC.
6125 N. PECATONICA RD.
PECATONICA, IL 61063

10. US EPA ID Number: ILD980502744

G. Illinois Facility's ID 2 0 1 8 0 0 0 0 0 2

H. Facility's Phone (815) 239-2377

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X	HM Hazardous Waste Solid NOS. (Potassium Chloride, Sodium Chloride) ORM-E NA1759 RQ (F012)	005	DM	00275	T	EPA HW Number XXF012 Authorization Number 060340
b.						EPA HW Number XX Authorization Number
c.						EPA HW Number XX Authorization Number
d.						EPA HW Number XX Authorization Number

J. Additional Description for Materials Listed Above
a. F012 WASTE SALT MID-01

K. Handling Codes for Wastes Listed Above In Item #14
1 = Gallons 2 = Cubic Yards

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT***1-800-535-5053 (567)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name [redacted] Signature [redacted] Date Month Day Year

TRANSPORTER — Printed/Typed Name Signature Date Month Day Year 10 09 91

19. Discrepancy Indication Space

FACILITY — 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name Signature Date Month Day Year

This Agency is authorized to require, pursuant to Illinois Revised Statutes, Chapter 111½ Section 21, that this information be submitted to the Agency. Failure to provide the information may result in a civil penalty against the owner or operator of not to exceed $25,000 per day of violation. Falsification of this information may result in a fine up to $50,000 per day of violation and imprisonment up to 5 years. This form has been approved by the Forms Management Center.

2

COPY 5. GENERATOR MAIL TO IEPA

In case of a spill call the Illinois Office of Emergency Response at 217/782-3637 and the National Response Center at 800/424-8802 or 202/426-2675

LAIDLAW ENVIRONMENTAL SERVICES

CUSTOMER NOTIFICATION AND CERTIFICATION

Only Statements with Original Signatures will be Accepted!

Generator Name/Location: WAYNE MFG., CO., CEDAR RAPIDS, IA

EPA I.D. Number: IAD005277256

Waste Profile or ARF Designation: WMD-01

Manifest Number: 12360140 6 DOC# 03398

EPA Hazardous Waste Number(s): F012

Waste Analysis Attached? YES _____ NO X _____ On file at facility.

—

Unrestricted Waste Notification (Category 1)
I notify that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste is not restricted as specified in 40 CFR 268, Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d).

X

Restricted Waste Notification (Category 2)
I notify that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that the waste is subject to the treatment standards specified in 40 CFR 268, Subpart D. Waste must be treated to the appropriate regulatory treatment standard, by the appropriate regulatory treatment method, or qualifies for a variance as described in Category 3 or meets the standard as described under Category 4.

Corresponding Treatment Standard(s)

_____

—

Restricted Waste Variance Notification (Category 3)
I notify pursuant to 40 CFR 268.7(a)(3) that I am familiar with the waste through analysis and testing or through knowledge of the waste to support this notification that this waste is subject to a national capacity variance under 40 CFR 268 Subpart C, or a case-by-case extension under 40 CFR 268.5, or an exemption under 40 CFR 268.6.

Applicable Variance (Give the date the waste is subject to prohibitions)

_____

—

Restricted Waste Certification (Category 4)
I certify under penalty of law that I personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification including the possibility of fine and imprisonment.

SIGNATURE [redacted] DATE: 10/9/91

PRINT NAME: _____ TITLE: _____

Generator Name/Location: WAYNE MFG., CO., CEDAR RAPIDS, IA

Sheet 1 of 1 Sheets

EPA ID Number: IAD005277256 Manifest Number: 12360406 DOC#03398

Waste Profile or ARF	Category #	EPA or State Waste Code	Variance Date	Sub Category	Treatability Group (WW or NWW)	40 CFR Ref.	Specific Treatment Technology	Legend #	Other
WMD-01	2	F012	1	-	NWW	268.43(a)			

4

LEGEND FOR TREATMENT STANDARDS EXPRESSED AS CONCENTRATION

TABLE CCWE-CONSTITUENTS IN WASTE EXTRACT

	F001-F005 spent solvent	Concentration (in mg/1) Waste Water Containing Spent Solvents	All other Spent Solvent Wastes
Legend #	Constituent Name		
1	Acetone	0.05	0.59
2	n-butyl alcohol	5.0	5.0
3	Carbon disulfide	1.05	4.81
4	Carbon Tetrachloride	.05	.96
5	Chlorobenzene	.15	.05
6	Cresols (and cresvlic acid)	2.82	.75
7	Cyclohexzanone	.125	.75
8	1.2-dichlorobenzene	.65	.125
9	Ethyl acetate	.05	.75
10	Ethyl benezene	.05	.053
11	Ethyl ether	.05	.75
12	Isobutanol	5.0	5.0
13	Methanol	.25	.75
14	Methylene chloride	.20	.96
15	Methylene chloride (from the pharmaceutical industry)	0.44	.96
16	Methyl ethyl ketone	0.05	0.75
17	Methyl isobuty ketone	0.05	0.33
18	Nitrobenzene	0.66	0.125
19	Pyridine	1.12	0.33
20	Tetrachlorethylene	0.079	0.05
21	Toluene	1.12	0.33
22	1.1.1-Trichloroethane	1.05	0.41
23	1.2.2-richloro-1.2.2-trifluroethane	1.05	0.96
24	Trichloroethylene	0.062	0.091
25	Thrichlorofluoromethane	0.05	0.96
26	Xylene	0.05	0.15

F010-F023 and F026-F028 dioxin Containing Waste		Concentration
Legend #	Constituent Name	
27	HxCCD-kAll Hexachlorodibenzo-p-dioxins	1 ppb
28	HxCDF-All Hexachlorodibenzofurans	1 ppb
29	PeCdd-All Pentachlorodibenzo-p-dioxins	1 ppb
30	PeCDF-All Pentachlorodibenzofurans	1 ppb
31	TCDD-All Tetrachlorodibenzo-p-dioxins	1 ppb
32	TCDF-All Tetrachlorodibenzofurans	1 ppb
33	2.4.5-Trichlorophenol	0.05 ppm
34	2.4.6-Trichlorophenol	0.05 ppm
35	2.3.4.6-Tetrachlorophenol	0.10 ppm
36	Pentachlorophenol	0.01 ppm

CALIFORNIA LIST WASTES

37	Nickel	134 mg/l
38	Thallium	130 mg/l
39	Cyanide (Liquid)	1000 mg/l

ease print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IAD005277256 | Manifest Document No. 02922 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
WAYNE MFG.
5051 WILLIAMS BLVD.
CEDAR RAPIDS IA 52401
4. Generator's Phone (319) 396-7010

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: FIN, INC. | 6. US EPA ID Number: ILD039616677 | C. State Transporter's ID | D. Transporter's Phone: 815 239-2377

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
ENVIROSAFE SERVICES OF OHIO, INC. (ESOI)
876 OTTER CREEK ROAD
OREGON OH 43616
10. US EPA ID Number: OHD045243706
G. State Facility's ID
H. Facility's Phone: 800 537-0425

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE CORROSIVE SOLID, N.O.S. (F011, D002) CORROSIVE MATERIAL ON 1759		1	DM	45000	P	F011 D002
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
85 CYANIDE SALT PRECIPITATE 1462A

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
ENVIROSAFE #7817

16. **GENERATOR'S CERTIFICATION**: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

[redacted] Month Day Year

17. [redacted] Month Day Year

TRANSPORTER

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

EPA Form 8700-22 (Rev. 9/86) Previous editions are obsolete.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF SOLID AND HAZARDOUS WASTE MANAGEMENT
P.O. Box 7035
Indianapolis, IN 46207-7035

1989

PLEASE PRINT OR TYPE (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. IAD005277256 | Manifest Document No. 09396 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law, but items D, F, H and I are required by State law.

3. Generator's Name and Mailing Address
WAYNE MFG.
5051 WILLIAMS BLVD.
CEDAR RAPIDS IA 52401
4. Generator's Phone (319) 396-7010

A. State Manifest Document Number: INA 0268218
B. State Generator's ID:

5. Transporter 1 Company Name: PIW, INC.
6. Use EPA ID Number: ILD039616677
C. State Transporter's ID:
D. Transporter's Phone: 815 239-2377

7. Transporter 2 Company Name:
8. Use EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
HERITAGE ENVIRONMENTAL SE
7901 WEST MORRIS STREET
INDIANAPOLIS IN 46231
10. Use EPA ID Number: IND093219012
G. State Facility's ID:
H. Facility's Phone: 317 243-0811

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol.	I. Waste No.
a. RQ WASTE SODIUM NITRATE OXIDIZER UN 1498 (D001)	001	DM	00100	P	D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
SPENT NITRATE SALT 50052731

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith [redacted] can afford.

17. [redacted] Month Date Day Year

18. [redacted] Month Date Day Year

Month Date Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted Item 19.

Printed/Typed Name | Signature | Month Day Year

GENERATOR
TRANSPORTER
FACILITY

In case of a spill call the Indiana Office of Environmental Response at 317/241-4336 (day or night) and the National Response Center at 800/424-8802 or 202/426-2675.

INA 0268218

EPA Form 8700-22
Previous editions are obsolete.
State Form 11865 (R/4-88)

COPY 8. GENERATOR COPY

WASTE PROFILE SHEET

58863

EXHIBIT A TO _____ Contract Date _____

prescribed by the Resource Conservation and Recovery Act (Public Law 98-580 Sec. 3004), a detailed chemical and physical analysis must be submitted fore USPCI can handle your waste stream. This information is necessary to evaluate whether your waste can safely and economically be transported and disposed in an environmentally sound manner. Be as complete as possible. If an area is not applicable, mark "NA". Should a laboratory analysis be available, please attach it to this form. We can arrange analytical laboratory services, if needed, for an appropriate fee. All information we receive will be held in strictest nfidence to protect your interests. **SAMPLE WILL NOT BE PROCESSED UNLESS ALL AREAS OF THIS SHEET ARE PROPERLY FILLED IN.**

rchase Order No. _____ I.O: WPS# _____ Representative Gary Freeman

I. GENERATOR INFORMATION

( ) Check if conditionally small quantity generator per 40 CFR 261.5(a)

Name of Company Wayne Manufacturing

US EPA ID IAD005217256

Facility Address 5051 Williams Blvd. SW
Cedar Rapids, IA 52404

Technical Contact [redacted]

Name _____

Title President

Telephone (319) 396-7010

Mailing Address _____

General Contact [redacted]

Company Name EASE

Name _____

Title Technical Rep.

Telephone (309) 788-4048

Invoice Directions EASE
2100 18th Ave
Suite 2N
Rock Island, IL 61201

II. SOURCE OF WASTE

Describe the product or business of generator
Contractor for specific projects - heat treating + metal forming

Waste Name: F012 Recycled Salts

Describe the waste generating process
See attachment

Estimate rate of waste generated 6 ☐ lbs/yr ☑ tons/yr ☐ gal/yr ☐ drums/yr ☐ One time only

Is the waste from a RCRA or CERCLA corrective action order? ___Yes ✓No (Check One)

Is EPA the generator? ___Yes ✓No

Is the generator an EPA contractor? ___Yes ✓No

Is the State the generator? ___Yes ✓No

Is the generator a State contractor? ___Yes ✓No

Is the generator a private party? ✓Yes ___No

III. WASTE PROPERTIES

Physical state at room temperature ✓Solid ___Liquid ___Sludge

Is the waste an Aqueous (water) Solution ___Yes ✓No

pH Range: (circle one) ≤ 2 2-4 5-8 (8-12.5) ≥ 12.5

OTHER PHYSICAL PARAMETERS:
Color grey - black Density 1,800 lb/yd³ Odor (optional) —

Is the waste contaminated ___Soil ___Debris

Describe _____

Chemical Composition and Constituents ( ) PPM
(✓)% (must total 100%)
(List all known)

	Range Lower	Range Upper
Potassium chloride	(___)	(50)
Sodium Cyanide	(___)	(50)
	(___)	(___)
	(___)	(___)
	(___)	(___)
	(___)	(___)
	(___)	(___)

IV. LISTED F, K, U, AND/OR P HAZARDOUS WASTES

This waste stream does not contain any F, K, U, or P listed waste either in pure form, as a mixture, or as a treatment residue (i.e. ash, leachate, spill cleanup, etc.) except as listed below.

F, K, U or P hazardous waste present? ✓Yes ___No

List the waste codes, if any, here F012

"Waste water" is defined by EPA as having less than 1% filterable solids and less than 1% total organic carbon, for the first third wastes.

Is this waste a "waste water"? ___Yes ✓No

Has this waste been treated to meet the applicable standards of Table CCWE and CCW? ✓Yes ___No

Does this waste meet the applicable standards of Table CCWE and CCW without treatment? ✓Yes ___No

Is this a mixed hazardous waste and PCB waste that has been treated in a high efficiency boiler, incinerator or other thermal treatment unit? ___Yes ✓No

If this waste is K061 then list the zinc concentration here _____ mg/kg

V. D-CODED HAZARDOUS WASTE (40 CFR 261 SUBPART C)

The concentrations referred to in items 4 through 17 are those determined to be EP Toxic.

Each item below must be circled yes or no

Item	D-Code	Parameter		Circle One
1.	D001	Ignitable	≤ 140°F	Yes (No)
2.	D002	Corrosivity	≤ 2.0 or ≥ 12.5	(Yes) No
3.	D003	Reactivity		Yes (No)
4.	D004	Arsenic	≥ 5.0 mg/l	Yes (No)
5.	D005	Barium	≥ 100 mg/l	Yes (No)
6.	D006	Cadmium	≥ 1.0 mg/l	Yes (No)
7.	D007	Chromium	≥ 5.0 mg/l	Yes (No)
8.	D008	Lead	≥ 5.0 mg/l	Yes (No)
9.	D009	Mercury	≥ 0.2 mg/l	Yes (No)
10.	D010	Selenium	≥ 1.0 mg/l	Yes (No)
11.	D011	Silver	≥ 5.0 mg/l	Yes (No)
12.	D012	Endrin	≥ 0.02 mg/l	Yes (No)
13.	D013	Lindane	≥ 0.4 mg/l	Yes (No)
14.	D014	Methoxychlor	≥ 10.0 mg/l	Yes (No)
15.	D015	Toxaphene	≥ 0.5 mg/l	Yes (No)
16.	D016	2, 4-D	≥ 10.0 mg/l	Yes (No)
17.	D017	2, 4, 5-TP Silvex	≥ 1.0 mg/l	Yes (No)

Is the waste contaminated _____Soil _____Debris

Describe _____

IV. LISTED F, K, U, AND/OR P HAZARDOUS WASTES

This waste stream does not contain any F, K, U, or P listed waste either in pure form, as a mixture, or as a treatment residue (i.e. ash, leachate, spill cleanup, etc.) except as listed below.

F, K, U or P hazardous waste present? ✓ Yes _____ No

List the waste codes, if any, here F012

"Waste water" is defined by EPA as having less than 1% filterable solids and less than 1% total organic carbon, for the first third wastes.

Is this waste a "waste water"? _____ Yes ✓ No

Has this waste been treated to meet the applicable standards of Table CCWE and CCW? ✓ Yes _____ No

Does this waste meet the applicable standards of Table CCWE and CCW without treatment? ✓ Yes _____ No

Is this a mixed hazardous waste and PCB waste that has been treated in a high efficiency boiler, incinerator or other thermal treatment unit? ✓ Yes _____ No

If this waste is K061 then list the zinc concentration here _____ mg/kg

V. D-CODED HAZARDOUS WASTE (40 CFR 261 SUBPART C)

The concentrations referred to in items 4 through 17 are those determined to be EP Toxic.

Each item below must be circled yes or no

Item	D-Code	Parameter		Circle One	
1.	D001	Ignitable	≤ 140°F	Yes	(No)
2.	D002	Corrosivity	≤ 2.0 or ≥ 12.5	(Yes)	No
3.	D003	Reactivity		Yes	(No)
4.	D004	Arsenic	≥ 5.0 mg/l	Yes	(No)
5.	D005	Barium	≥ 100 mg/l	Yes	(No)
6.	D006	Cadmium	≥ 1.0 mg/l	Yes	(No)
7.	D007	Chromium	≥ 5.0 mg/l	Yes	(No)
8.	D008	Lead	≥ 5.0 mg/l	Yes	(No)
9.	D009	Mercury	≥ 0.2 mg/l	Yes	(No)
10.	D010	Selenium	≥ 1.0 mg/l	Yes	(No)
11.	D011	Silver	≥ 5.0 mg/l	Yes	(No)
12.	D012	Endrin	≥ 0.02 mg/l	Yes	(No)
13.	D013	Lindane	≥ 0.4 mg/l	Yes	(No)
14.	D014	Methoxychlor	≥ 10.0 mg/l	Yes	(No)
15.	D015	Toxaphene	≥ 0.5 mg/l	Yes	(No)
16.	D016	2, 4-D	≥ 10.0 mg/l	Yes	(No)
17.	D017	2, 4, 5-TP Silvex	≥ 1.0 mg/l	Yes	(No)

VI. CALIFORNIA LIST WASTES

For all liquid hazardous waste including free liquids associated with any sludge or solid, does the liquid contain any of the following parameters in excess of the listed limit? Each item below must be circled yes or no.

Item	Parameter	Limit	Circle One
1.	pH	≤ 2.0	Yes (No)
2.	Free Cyanides (per EPA method 9010 or 9012)	≥ 1000 mg/l	Yes (No)
3.	PCBs	≥ 50 mg/l	Yes (No)
4.	Arsenic and/or compounds (as As)	≥ 500 mg/l	Yes (No)
5.	Cadmium and/or compounds (as Cd)	≥ 100 mg/l	Yes (No)
6.	Chromium (VI) and or compounds (as CrVI)	≥ 500 mg/l	Yes (No)
7.	Lead and/or compounds (as Pb)	≥ 500 mg/l	Yes (No)
8.	Mercury and/or compounds (as Hg)	≥ 20 mg/l	Yes (No)
9.	Nickel and/or compounds (as Ni)	≥ 134 mg/l	Yes (No)
10.	Selenium and/or compounds (as Se)	≥ 100 mg/l	Yes (No)
11.	Thallium and/or compounds (as Tl)	≥ 130 mg/l	Yes (No)

All yes or no choices must be made. For all wastes attach copy of waste analysis data, if available.

Halogenated Organic Compounds (HOCs)

Does the waste stream contain a total concentration of halogenated organic compounds (see attached HOC LIST - Appendix III to Part 268) in excess of 1,000 mg/l.

_____ Yes ✓ No

VII. SHIPPING INFORMATION (49 CFR 172)

Proper DOT Shipping Name RQ, Waste Corrosive Solid, n.o.s. (Potassium Chloride, Sodium Cyanide

DOT Hazard Class Corrosive Material UN/NA Number UN 1759 Reportable Quantity 100 lb.

Method of Shipment ( ) Bulk Liquids ( ) Bulk Solids

(✓) Drums ( ) Other explain _____

Special Handling and Safety Instructions _____

I certify and warrant that the above information, the information attached, and the waste stream as described is true and correct to the best of my knowledge and ability. Willful or deliberate omissions have not been made. All known and/or suspected hazards have been disclosed. A sample representative of the waste stream has been collected using EPA approved methods and has been or is being sent to the proper facility.

S [redacted]

President
Title

12/19/90
Date

Appendix K

MSDS For Resins Used By WMC
To Manufacture fiberglass Hammer Handles

72-62-7820-02

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

Ashland

MATERIAL SAFETY DATA SHEET

24-HOUR EMERGENCY TELEPHONE (606) 324-1133

004504151

AROPOL Q 6944

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

****

Product Name: AROPOL Q 6944
CAS NUMBER: IG LIST - -

Data Sheet No: 0190756-003
Prepared: 05/31/89
Supersedes: 12/14/88

HMIS®

NORTHWEST FIBERGLASS SPLY INC
3055 COLUMBIA AVENUE N E
MINNEAPOLIS MN 55418

03 56 033 6588500-

PRODUCT: 568044
INVOICE: 321427
INVOICE DATE: 05/23/89
TO: SAME

ATTN: PLANT MGR./SAFETY DIR.

H 2 HEALTH
F 3 FLAMMABILITY
R 2 REACTIVITY
PERSONAL PROTECTION
NC-L503R ©1981 NPCA

SECTION I: PRODUCT IDENTIFICATION

General or Generic ID: UNSATURATED POLYESTER RESIN

DOT Hazard Classification: FLAMMABLE LIQUID (173.115)

SECTION II: COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

INGREDIENT	% (by WT)	PEL	TLV	ote
STYRENE CAS #: 100-42-5	30	50 PPM	50 PPM	(1)

Notes:

(1) ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR STYRENE MONOMER IS 100 PPM. THE OSHA ACCEPTABLE CEILING CONCENTRATION IS 200 PPM. THE ACCEPTABLE MAXIMUM PEAK ABOVE THE ACCEPTANCE CEILING CONCENTRATION FOR AN 8-HOUR SHIFT IS 600 PPM FOR A MAXIMUM DURATION OF 5 MINUTES IN ANY 3 HOURS. NIOSH RECOMMENDS A LIMIT OF 50 PPM, 8-HOUR TWA; 100 PPM 15 MINUTE CEILING.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

SECTION III: PHYSICAL DATA

Boiling Point	for COMPONENT(30%)	293.40 Deg F (145.22 Deg C) @ 760.00 mm Hg
Vapor Pressure	for COMPONENT(30%)	5.00 mm Hg @ 68.00 Deg F (20.00 Deg C)
Specific Vapor Density	AIR = 1	3.6
Specific Gravity		1.142 - 1.166 @ 77.00 Deg F (25.00 Deg C)
Percent Volatiles		30-35%
Evaporation Rate		SLOWER THAN ETHER

SECTION IV: FIRE AND EXPLOSION INFORMATION

FLASH POINT 73.0 - 100.0 Deg F (22.8 - 37.8 Deg C)

EXPLOSIVE LIMIT (PRODUCT) LOWER - 1.1%

EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS:, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.

FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.

SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

ALL FIVE GALLON PAILS AND LARGER METAL CONTAINERS INCLUDING TANK CARS AND TANK TRUCKS SHOULD BE GROUNDED AND/OR BONDED WHEN MATERIAL IS TRANSFERRED.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

NFPA CODES: HEALTH- 2 FLAMMABILITY- 3 REACTIVITY- 2

SECTION V: HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL: NOT ESTABLISHED FOR PRODUCT; SEE SECTION II AND SECTION IX.

CONTINUED ON PAGE: 2

SECTION V - HEALTH HAZARD DATA (Continued)

EFFECTS OF ACUTE OVEREXPOSURE: FOR COMPONENT

EYES - CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION.
SKIN - PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING, DERMATITIS.
BREATHING - EXCESSIVE INHALATION OF VAPORS CAN CAUSE NASAL AND RESPIRATORY IRRITATION, CENTRAL NERVOUS SYSTEM EFFECTS INCLUDING DIZZINESS, WEAKNESS, FATIGUE, NAUSEA, HEADACHE AND POSSIBLE UNCONSCIOUSNESS, AND EVEN DEATH.
SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: DO NOT INDUCE VOMITING, KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET, AND GET MEDICAL ATTENTION.

PRIMARY ROUTE(S) OF ENTRY:

INHALATION, SKIN CONTACT

EFFECTS OF CHRONIC OVEREXPOSURE: FOR COMPONENT

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED STYRENE IN GROUP 2B (POSSIBLY CARCINOGENIC TO HUMANS). THIS CLASSIFICATION IS NOT BASED ON ANY SIGNIFICANT NEW EVIDENCE THAT STYRENE MAY BE CARCINOGENIC, BUT RATHER ON A REVISED DEFINITION FOR GROUP 2B AND CONSIDERATION OF NEW DATA ON STYRENE OXIDE. A NUMBER OF LIFETIME ANIMAL STUDIES WITH STYRENE INCLUDING THOSE CONDUCTED IN THE NCI BIOASSAY PROGRAM HAVE NOT SHOWN STYRENE TO BE CARCINOGENIC.

OVEREXPOSURE TO STYRENE HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: LIVER ABNORMALITIES, KIDNEY DAMAGE AND LUNG DAMAGE.

SECTION VI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CAN OCCUR -- AVOID EXPOSURE TO EXCESSIVE HEAT, PEROXIDES AND POLYMERIZATION CATALYSTS.

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH:, STRONG ALKALIES., STRONG MINERAL ACIDS.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD.

LARGE SPILL: ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS.

WASTE DISPOSAL METHOD:

SMALL SPILL: ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DISPOSE OF REMAINING MATERIAL IN ACCORDANCE WITH APPLICABLE REGULATIONS.

LARGE SPILL: DESTROY BY LIQUID INCINERATION IN ACCORDANCE WITH APPLICABLE REGULATIONS.

CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II) A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, POLYVINYL ALCOHOL

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: NORMAL WORK CLOTHING COVERING ARMS AND LEGS.

SECTION IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATASHEET MUST BE OBSERVED.

EXPOSURE TO AEROSOLS AND MISTS WHEN MATERIAL IS SPRAYED MAY PRESENT A GREATER RISK OF INJURY FROM COMPONENTS BECAUSE HIGHER CONCENTRATIONS ARE IN THE ATMOSPHERE THAN RESULT FROM VAPOR ALONE. PROVIDE ADEQUATE

CONTINUED ON PAGE: 3

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

DEFINITIONS

This definition page is intended for use with Material Safety Data Sheets supplied by the Ashland Chemical Company. Recipients of these data sheets should consult the OSHA Safety and Health Standards (29 CFR 1910), particularly subpart G - Occupational Health and Environmental Control, and subpart I - Personal Protective Equipment, for general guidance on control of potential Occupational Health and Safety Hazards.

SECTION I
PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: Chemical family or product description.

DOT HAZARD CLASSIFICATION: Product meets DOT criteria for hazards listed.

SECTION II
COMPONENTS

Components are listed in this section if they present a physical or health hazard and are present at or above 1% in the mixture. If a component is identified as a CARCINOGEN by NTP, IARC or OSHA as of the date on the MSDS, it will be listed and footnoted in this section when present at or above 0.1% in the product. Negative conclusions concerning carcinogenicity are not reported. Additional health information may be found in Section V. Components subject to the reporting requirements of Section 313 of SARA Title III are identified in the footnotes in this section, along with typical percentages. Other components may be listed if deemed appropriate.

Exposure recommendations are for components. OSHA Permissible Exposure Limits (PELs) and American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) appear on the line with the component identification. Other recommendations appear as footnotes.

SECTION III
PHYSICAL DATA

BOILING POINT: Of product if known. The lowest value of the components is listed for mixtures.

VAPOR PRESSURE: Of product if known. The highest value of the components is listed for mixtures.

SPECIFIC VAPOR DENSITY: Compared to AIR = 1. If Specific Vapor Density of product is not known, the value is expressed as lighter or heavier than air.

SPECIFIC GRAVITY: Compared to WATER = 1. If Specific Gravity of product is not known, the value is expressed as less than or greater than water.

pH: If applicable.

PERCENT VOLATILES: Percentage of material with initial boiling point below 425 degrees Fahrenheit and vapor pressure above 0.1mm Hg at 68 F.

EVAPORATION RATE: Indicated as faster or slower than ETHYL ETHER, unless otherwise stated.

SECTION IV
FIRE AND EXPLOSION DATA

FLASH POINT: Method identified.

EXPLOSION LIMITS: For product if known. The lowest value of the components is listed for mixtures.

HAZARDOUS DECOMPOSITION PRODUCTS: Known or expected hazardous products resulting from heating, burning or other reactions.

SECTION IV (cont.)

EXTINGUISHING MEDIA: Following National Fire Protection Association criteria.

FIREFIGHTING PROCEDURES: Minimum equipment to protect firefighters from toxic products of vaporization, combustion or decomposition in fire situations. Other firefighting hazards may also be indicated.

SPECIAL FIRE AND EXPLOSION HAZARDS: States hazards not covered by other sections.

NFPA CODES: Hazard ratings assigned by the National Fire Protection Association.

SECTION V
HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LIMIT: For product.

THRESHOLD LIMIT VALUE: For product.

EFFECTS OF ACUTE OVEREXPOSURE: Potential local and systemic effects due to single or short term overexposure to the eyes and skin or through inhalation or ingestion.

EFFECTS OF CHRONIC OVEREXPOSURE: Potential local and systemic effects due to repeated or long term overexposure to the eyes and skin or through inhalation or ingestion.

FIRST AID: Procedures to be followed when dealing with accidental overexposure.

PRIMARY ROUTE OF ENTRY: Based on properties and expected use.

SECTION VI
REACTIVITY DATA

HAZARDOUS POLYMERIZATION: Conditions to avoid to prevent hazardous polymerization resulting in a large release of energy.

STABILITY: Conditions to avoid to prevent hazardous or violent decomposition.

INCOMPATIBILITY: Materials and conditions to avoid to prevent hazardous reactions.

SECTION VII
SPILL OR LEAK PROCEDURES

Reasonable precautions to be taken and methods of containment, clean-up and disposal. Consult federal, state and local regulations for accepted procedures and any reporting or notification requirements.

SECTION VIII
PROTECTIVE EQUIPMENT TO BE USED

Protective equipment which may be needed when handling the product.

SECTION IX
SPECIAL PRECAUTIONS OR OTHER COMMENTS

Covers any relevant points not previously mentioned.

ADDITIONAL COMMENTS

Containers should be either reconditioned by CERTIFIED firms or properly disposed of by APPROVED firms. Disposal of containers should be in accordance with applicable laws and regulations. "EMPTY" drums should not be given to individuals. Serious accidents have resulted from the misuse of "EMPTIED" containers (drums, pails, etc.). Refer to Sections IV and IX.

Ashland Chemical Company
DIVISION OF ASHLAND OIL, INC.
P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333
24-HOUR EMERGENCY TELEPHONE (606) 324-1133

SECTION IX - SPECIAL PRECAUTIONS OR OTHER COMMENTS (Continued)

VENTILATION AND IF NECESSARY, USE RESPIRATORY PROTECTION.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

 LAST PAGE--SEE ATTACHMENT PAGE ENCLOSED--LAST PAGE